

DUKE
UNIVERSITY



LIBRARY

DUKE UNIVERSITY LIBRARY

MANUSCRIPT THESES

This volume may be consulted freely, but the literary rights of the author must be respected. No passage may be copied or closely paraphrased without the previous written consent of the author. If the reader obtains assistance from this volume he must give credit in his own work.

This thesis by Charles Louis Kronberg has been used by the following persons, whose signatures attest their acceptance of the above restrictions.

A library borrowing this thesis for use by one of its patrons should secure the signature of the user.

NAME

David Freedman

ADDRESS

1014 E 8th St Lansing MI

DATE

Aug 2-77



Digitized by the Internet Archive
in 2016

<https://archive.org/details/interpersonalssty00kron>

Duke University Library

The use of this thesis is subject to the usual restrictions that govern the use of manuscript material. Reproduction or quotation of the text is permitted only upon written authorization from the author of the thesis and from the academic department by which it was accepted. Proper acknowledgment must be given in all printed references or quotations.

INTERPERSONAL STYLE AND COMPLEMENTARY
RESPONSE EVOCATION

by

Charles Louis Kronberg

Department of Psychology
Duke University

Date: April 25, 1975

Approved:

Robert C. Carson
Robert C. Carson, Supervisor

Derek J. Shows
Derek J. Shows
Cliff S. Shimp
Cliff S. Shimp

Dissertation submitted in partial fulfillment of
the requirements for the degree of Doctor
of Philosophy in the Department of
Psychology in the Graduate School
of Duke University

1975



ABSTRACT

(Psychology-Clinical)

INTERPERSONAL STYLE AND COMPLEMENTARY RESPONSE EVOCATION

by

Charles Louis Kronberg

Department of Psychology
Duke University

Date:

Approved:

Robert C. Carson, Supervisor

An abstract of a dissertation submitted in partial
fulfillment of the requirements for the degree
of Doctor of Philosophy in the Department of
Psychology in the Graduate School of
Duke University

1975

Ph. D
K93I
1972

ABSTRACT

INTERPERSONAL STYLE AND COMPLEMENTARY RESPONSE EVOCATION

by

Charles Louis Kronberg

Leary (1957) presented a circumplex system to classify the entire domain of interpersonal behavior around two major axes--dominance-submission and hostility-affection. The four quadrants of the Leary Circle have also been used to characterize four basic styles of relating. In addition to a classification system, Leary has also provided notions about the types of interpersonal behavior which are naturally elicited by, or complementary to, every type of behavior on the circumplex. Carson (1969) has summarized Leary's notions about interpersonal complementarity into one general hypothesis, which states that complementarity occurs on the basis of reciprocity in respect to dominance-submission and on the basis of correspondence in respect to hostility-affection. There has been some empirical validation of this hypothesis, and further empirical investigation was attempted in the present study.

With regard to psychopathology, both Leary and Carson maintain that "normal" individuals are flexible in terms of the interpersonal styles they choose to adopt in relating to others, while disturbed individuals are much less flexible. Because disordered individuals continually respond in the same style, they force others to respond to them in a self-image confirming, pathology-reinforcing fashion. The chief aim of the present study was to investigate the above conceptualization empirically.

The general experimental procedure entailed presenting groups of undergraduate female subjects with sets of statements prepared to simulate "fixated" (stylistically limited) and "flexible" interactants. There were 8 content-controlled stimulus tapes, consisting of 36 statements each; and 10 subjects were randomly assigned to listen to each tape. The same actress performed the statements on each tape. Subjects were told to respond to each recorded statement they heard as if they were interacting with a real person, and their responses were recorded. After the subjects finished responding to the tapes, their responses to the first three, middle three, and last three statements were rated on 7-point Dominance-Submission and Hostility-Affection scales by three independent raters. The rating system used by the raters was prepared for the experiment in order to overcome a number of shortcomings evidenced in previously employed methods to code interactions according to the Leary system.

It was predicted that: (a) Complementarity, as hypothesized by

Carson, would be evident in response to any given statements made in the same style. This should be true whether the interactant making the statement was fixated or flexible. (b) As the interaction proceeds from beginning to end, however, fixated interactants should elicit complementary responses more regularly and successfully than flexible interactants. (c) By the end of the interaction, when comparing the responses of subjects to identical statements made by fixated versus flexible interactants, differences should be evident; i.e. subjects responding to fixated interactants should be responding in a less variable and more complementary fashion than subjects responding to flexible interactants.

The results provided confirmation only for that part of Carson's complementarity hypothesis stating that complementarity occurs on the basis of correspondence with respect to hostility-affection. All of the other predictions were not confirmed. The inter-rater reliability of the rating system was at a high level, and the experimental manipulation was shown to be effective; i.e. fixated and flexible interactants were simulated. Careful inspection of the pattern of the results pertaining to dominance-submission complementarity, and a re-examination of relevant empirical studies previously undertaken, suggested a reformulation of Carson's complementarity hypothesis when it pertains to dominance and submission.

Explanations were offered which could account for the failure of all of the other predictions to be confirmed. Possible difficulties with both the conceptual foundations of the hypotheses and with the methodology

employed in testing the hypotheses were considered in these explanations. The methodological attainments of the study--the rating system and the stimulus tapes employed--were also discussed in some detail. Implications and suggestions for future research were presented throughout the Discussion section.

ACKNOWLEDGMENTS

I wish to express deep appreciation to Dr. Robert Carson for his encouragement, advice, interest, availability, and helpful suggestions during every phase of this project.

In addition, I wish to thank the other members of my committee and especially Dr. Harold Schiffman, who provided support and intellectual stimulation throughout my graduate studies, and Dr. Clifford Wing, who was most helpful in the planning stages of this study.

I wish to thank Dr. Terry Vance and Ms. Laurel Goldman for the many hours they worked with me in preparing the stimulus tapes. Thanks are also due to Mr. John Cowgell, Dr. Virginia Cowgell, and Ms. Elissa Schroeder for their cooperation in serving as raters.

Finally, I would like to thank Mrs. Edna Bissette, who skillfully typed the manuscript, made useful suggestions regarding the format, and who, in her own way, continually expressed genuine interest and support.

C. L. K.

CONTENTS

ABSTRACT	iii
ACKNOWLEDGMENTS	vii
LIST OF TABLES	x
LIST OF FIGURES	xii
I. INTRODUCTION	1
An Interpersonal System for Categorizing Interpersonal Behavior and Personality	4
Interpersonal Complementarity	11
Disordered Evocation of Complementary Responses	24
Aims and Overview of the Present Study	32
II. METHOD	37
Overview of Procedures	37
Procedures for the Preparation of Stimulus Materials	38
Procedures for Data Collection	53
Procedures for Preparing the Data for Analysis	63
III. RESULTS	73
Inter-Rater Reliability	73
Experimental Design	74
Examination of the Experimental Manipulations	77
The Effect of Order	84
Examination of Results Pertaining to the Style Hypothesis	104
Examination of Results Pertaining to the Variability Hypothesis	110
Examination of Results Pertaining to the Restriction Hypothesis	117

IV. DISCUSSION	127
Methodological Attainments: The Rating System and the Stimulus Tapes	128
Interpersonal Complementarity: Discussion of the Results Pertaining to the Style Hypothesis	134
The Disordered Evocation of Complementary Responses: Discussion of Results Pertaining to the Variability and Restriction Hypotheses	143
APPENDIX I: INSTRUCTIONS TO RATERS	149
APPENDIX II: THE STIMULUS TAPES	170
APPENDIX III: PROCEDURE FOR PREPARING PRACTICE TAPE	183
REFERENCES	185

LIST OF TABLES

Table	Page
1. Reliability Coefficients for D-S and A-H Ratings of Items Included in Later Analyses	75
2. Means and Standard Deviations for ICL Perception Data	79
3. Summary Multivariate Analysis of Variance for ICL Perception Data	80
4. Summary of Multivariate Tests of Specific Hypotheses Pertaining to ICL Perception Data	83
5. Means and Standard Deviations of D-S and A-H Beginning, Middle, and End Mean Scores	86
6. Summary Multivariate Analysis of Variance for Beginning and End Mean Score Contrasts	87
7. Mean D-S and A-H Responses to Cluster A and B Items at the End of the Interaction	95
8. Means and Standard Deviations of D-S and A-H Beginning, Middle, and End Variability Scores	97
9. Summary Multivariate Analysis of Variance for Beginning and End Variability Score Contrasts	98
10. Summary Multivariate Analysis of Variance for Beginning, Middle, and End Mean Score Contrasts -- Forward Experiment Only	105
11. Summary Multivariate Analysis of Variance for Beginning, Middle, and End Mean Score Contrasts -- Backward Experiment Only	106

Table		Page
12.	Summary Multivariate Analysis of Variance for Beginning-End Variability Difference Score Contrasts--Forward and Backward Experiments	113
13.	Summary Multivariate Analysis of Variance for Beginning-Middle Variability Difference Score Contrasts--Forward and Backward Experiments	115
14.	Summary Multivariate Analysis of Variance for Middle-End Variability Difference Score Contrasts--Forward and Backward Experiments	116
15.	Summary Multivariate Analysis of Variance for Beginning-End Mean Difference Score Contrasts-- Forward and Backward Experiments	120
16.	Summary Multivariate Analysis of Variance for Beginning-Middle Mean Difference Score Contrasts--Forward and Backward Experiments	121
17.	Summary Multivariate Analysis of Variance for Middle-End Mean Difference Score Contrasts-- Forward and Backward Experiments	122

LIST OF FIGURES

Figure	Page
1. Leary Interpersonal Behavior Circle.	6
2. Schematic Representation of the Submission-Dominance and Affection-Hostility Rating Scales.	41
3. Schematic Representation of Stimulus Tapes.	49
4. Model of Stimulus Tapes.	54
5. The Main Effect of Order on Beginning and End D-S and A-H Mean Scores.	89
6. Item Composition of Cluster A and Cluster B.	91
7. The Main Effect of Order on D-S and A-H Beginning and End Variability Scores (with significant O x S interaction).	101
8. The Main Effect of Style on Beginning, Middle, and End D-S Mean Scores in the Forward and Backward Experiments.	109
9. The Main Effect of Style on Beginning, Middle, and End A-H Mean Scores in the Forward and Backward Experiments.	111
10. Predicted Pattern of Results for Analyses Relevant to the Restriction Hypothesis.	124

CHAPTER I

INTRODUCTION

There are considerable differences among therapists in the emphasis they place on dealing directly with interpersonal difficulties, and considerable disagreement as to the role of the client in maintaining these difficulties. While some therapists may see disordered individuals as lacking interpersonal skills, or as so "hung up" with intrapsychic conflicts or behavioral symptoms that they do not have the energy to devote to forming or maintaining fulfilling relationships, other therapists see maladjusted individuals as "masters" at controlling relationships and creating interpersonal environments that reinforce their own disordered behavior.

Haley (1963), for example, sees symptoms as interpersonal tactics. He says,

The crucial aspect of a symptom is the advantage it gives the patient in gaining control of what is happening in relationship with someone else. A symptom may represent distress to a patient subjectively, but such distress is preferred by some people to living in a world of social relationships over which they have little control (p. 15).

Berne (1961, 1964) characterizes disordered individuals as experts

at initiating certain types of interpersonal transactions which he calls "games." Games are highly structured ways of interacting which follow definite patterns and are "circumscribed by unspoken rules and regulations (1961, p. 86)." Berne illustrates how disordered individuals can skillfully, and at times ruthlessly, force people into playing their "game," thereby both controlling the types of responses they receive from other people and reinforcing their own limited, but highly self-protective, ways of relating.

Levenson (1972) views the interpersonal world of neurotic patients as an "active creation." Taking issue with the view that "neurosis . . . is when one knows only one way of doing things and that doesn't work," Levenson represents the neurotic patient as an agent trying to impose a system of relating.

He [the neurotic] does not misinterpret the "real" world, he does not make the same mistakes over and over again because he does not hear the feedback, rather he creates a total environment . . . Neurotic systems are extremely efficient . . . The patient is an expert in banality; he reduces the novelty of any new situation so effectively that it is very difficult to present him with a new experience (pp. 200 and 204).

Leary (1957) proposes that "interpersonal events do not just happen to humans by accident or executive design. The active and executive role is given to the subject (p. 116)." Consequently, Leary sees people as responsible for the way in which they are treated by others, and his view is evident in the following statement: "Your own interpersonal behavior has, more than any other factor, determined the reception you

get from others (p. 117)."

Leary sees disordered individuals as both limited in their interpersonal behavior repertoire and as "incredibly and creatively skilled" in drawing from others responses which reinforce their own maladaptive behavior. He claims that "many subjects with maladaptive interpersonal patterns can provoke the expected [pathology-reinforcing] response from a complete stranger in a matter of minutes (p. 116)."

It is the purpose of this study to investigate empirically the notion that disordered individuals create and maintain the present-day relationship problems they encounter by affecting the way in which people respond to them. This will be done by attempting to ascertain whether or not a specific type of behaving, which is considered by some theorists to be the basic maladaptive interpersonal mechanism, can indeed significantly affect the responses of others in a way that reinforces the pathology of disordered individuals.

In order to study interpersonal behavior of any nature, however, we first need a system that can be utilized to observe and classify interpersonal behavior and that is inclusive enough to consider the vast range of acts covered by the term "interpersonal behavior." Furthermore, if we are interested in the behavior of individuals, we also need a system that can be used to classify people meaningfully on interpersonal dimensions. Fortunately, such a system is available and will be presented in the next section.

An Interpersonal System for Categorizing
Interpersonal Behavior and Personality

Leary and his co-workers at the Kaiser Foundation during the 1950's (Freedman, Leary, Ossorio, & Coffey, 1951; La Forge, Leary, Nabosiek, Coffey, & Freedman, 1954; La Forge & Suczek, 1955; Leary, 1957) devised a comprehensive system for the study of interpersonal behavior based upon a two-dimensional circumplex model. Leary's system bears close similarity to, or has served as the basis for, many later-developed systems for describing or classifying interpersonal behavior (e.g. Becker & Krug, 1964; Benjamin, 1974; Chance, 1966; Schaeffer, 1959). In addition to the comprehensiveness and intuitive relevance of the Leary system, independently undertaken studies have added support to the empirical validity of this system (e.g. Foa, 1961; Lorr & McNair, 1963, 1965).

Carson (1969), upon reviewing a large body of empirical literature, demonstrates that Leary's system for categorizing interpersonal behavior captures the major "dimensions of human interaction," and, in addition, can be effectively utilized for studying personality in an interpersonal context. He concludes:

Major portions of the domain of interpersonal behavior can profitably and reasonably accurately be conceived as involving variation on two independent, bipolar dimensions. One of these may be called a dominance submission dimension; it includes dominant, assertive, ascendant, leading, controlling (etc.) behaviors on the one hand and submissive, retiring, obsequious, unassertive, following (etc.) behaviors on the other. The poles of the second principal dimension are perhaps best approximated by the terms hate versus love; the former includes

hateful, aggressive, rejecting, punishing, attacking, disaffiliative (etc.) behaviors, while the latter includes accepting, loving, affectionate, affiliative, friendly (etc.) social actions (p. 102).

Leary's system consists of circularly ordering behaviors around two major axes--"Dominance-Submission" and "Hostility-Affection." Leary's "Interpersonal Behavior Circle" is presented in Figure 1. Its properties are discussed in detail by Leary (1957).

Briefly, the Leary system consists of 16 categories of interpersonal behavior arranged in circular fashion around the two major dimensions. Each category of behavior is represented by a letter ranging from A to P. In addition, the categories are labeled in eight pairs, representing octants of the circle (e.g. Managerial-Autocratic; Self-Effacing-Masochistic). The first word in each octant pair represents a behavior in its milder form, while the second word represents that behavior in an extreme or intense form. Intensity of behavior is also graphically represented by its distance from the center of the circle.

Categories of behavior that are adjacent to one another on the circle are highly correlated and are assumed to have similar psychological significance. The farther away a category is from any other category, the less highly they are correlated. Categories directly across the circle from each other are strongly negatively correlated and are considered polar opposites on both dimensions. Since adjacent categories are positively correlated, in many instances behavior can be meaningfully represented by noting the quadrant of the circle in which it is represented.

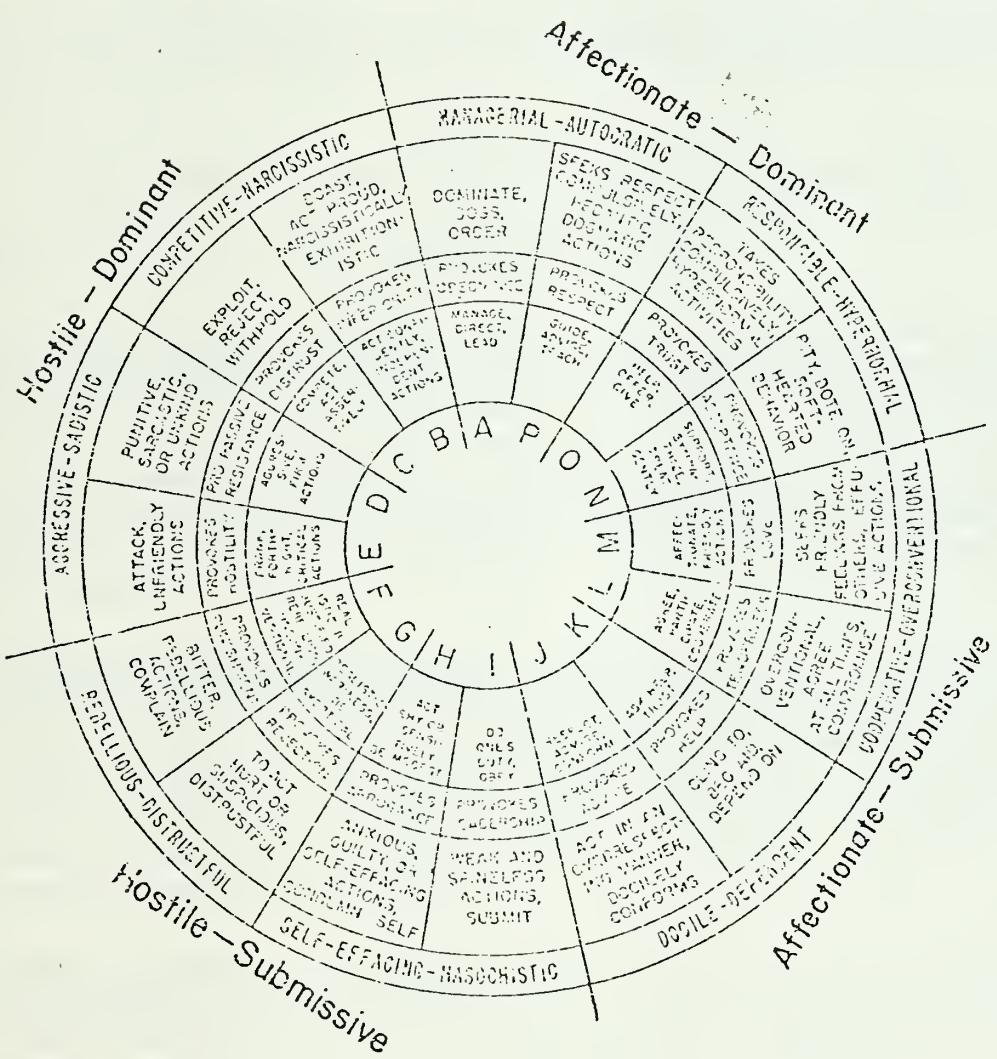


Figure 1. Leary Interpersonal Behavior Circle

Each quadrant represents the intersection of the two major axes and can be labeled as follows: Affectionate or Friendly-Dominant (A-D or F-D); Affectionate or Friendly-Submissive (A-S or F-S); Hostile-Dominant (H-D); Hostile-Submissive (H-S). (Quadrants are appropriately labeled in Figure 1.)

Edquist (1973) provides brief descriptions of each of these four types of behavior, and his descriptions follow:

Friendly-Dominant Behavior. This category includes the behavior in the "Managerial-Autocratic" and the "Responsible-Hypernormal" octants of the "Interpersonal Behavior Circle." It includes dominant behavior which is tinged with positive affect, friendliness, or collaboration, such as leadership, advice, and guidance. Also included are more strongly affiliative behaviors which also have a component of dominance, such as giving support, sympathy, help, and nurturance of all kinds.

Friendly-Submissive Behavior. This refers to the "Docile-Dependent" and "Cooperative-Overconventional" ranges of the "Interpersonal Behavior Circle." The behaviors involve positive affect and a collaborative attitude, but also have a submissive aspect. Examples of behaviors included are cooperation, compromise, expressing admiration, seeking advice or guidance, asking for help or support, being respectful and conforming.

Hostile-Submissive Behavior. Included here are the "Self-Effacing-Masochistic" and the "Rebellious-Distrustful" behaviors of the Circle. Like FS behavior, this type of behavior has a passive, non-dominant quality, but it lacks the component of warmth, affiliation, or positive affect. It ranges from modesty, self-deprecation, and passive obedience tinged with hostility, to more overtly hostile or disaffiliative behavior such as cynical, bitter, wary, withdrawing, complaining, skeptical, and provocatively unconventional behavior.

Hostile-Dominant Behavior. This category combines the "Aggressive-Sadistic" and the "Competitive-Narcissistic" parts of the Circle. The behaviors include those hostile or unaffiliative behaviors which are tinged with dominance, such as arguing, attacking, criticizing, aggression, and sarcasm. Also included are behaviors which primarily reflect dominance but have some hostile quality, such as

competitive, self-enhancing behavior in which the other is "put down." The affiliative quality of FD behaviors is not present (pp. 6-8).

Carson (1969) illustrates how the quadrant classification can be efficiently, but effectively, utilized to describe interpersonal behavior (pp. 132-142). In addition, Carson uses the quadrants to characterize four interpersonal styles of relating (F-D; F-S; H-D; and H-S). Carson defines interpersonal style as "a discriminable tendency to enact sets falling predominantly, although often subtly, within a particular range of the interpersonal circle (p. 142)." More simply, interpersonal style may be viewed as an individual's preferred, or relatively stable and enduring, mode or stance of relating to others. (A thorough discussion of the concept of interpersonal style is provided by Kronberg, 1970.) Each of the four styles described by Carson contains a range of related behavior from the interpersonal circle; and since these styles appear to represent the major stances people are disposed toward adopting in their interactions with others, Leary's system provides a useful way of classifying personality in an interpersonal context.

Coding interpersonal behavior

Although Leary provides a promising system for categorizing interpersonal behavior, there has only been a limited amount of research done utilizing his system. In most of the research that has been done, units of interaction, usually uninterrupted utterances made by individuals, have been coded using Leary's category definitions as the basis for coding.

In some studies (McKenzie, 1968; Mueller, 1969; Raush, Dittman, & Taylor, 1959), all of Leary's 16 categories were utilized for rating raw data, although at times 16th ratings were combined into octant or quadrant ratings. In other studies, raters categorized behavior by octants (Shannon & Guerney, 1973; Terrill & Terrill, 1965); and in other studies a quadrant categorization was employed (Dietzel, 1972; Heller, Myers, & Kline, 1963).

McKenzie (1968), in a study of the interpersonal interaction of normal and clinic family members, calculated the inter-rater agreement on the same sample of responses using varying specificity of categorization, i.e. 16 categories; 8 categories (octants); 4 categories (quadrants); and 2 categories (dimensions). She found that mean rater agreement improved consistently (from 57% to 84%) as specificity of categorization decreased. Mueller (1969), Mueller and Dilling (1968), and Dittman (1958) consider problems of reliability using the Leary system and suggest ways of improving and appropriately determining reliability.

Terrill and Terrill (1965) indicate the need for a more formal and explicit system for coding interpersonal behavior within the Leary system. They point out that Leary defines categories loosely, by listing series of words which provide examples of the kinds of interpersonal behavior that fit the categories in question. They suggest that a more formal, explicit system could serve to improve rater reliability without decreasing specificity of ratings.

In order to sharpen the precision of the Leary system, Terrill and Terrill (1965) attempt to provide more formal definitions for each of the eight categories. They note that the vertical dimension of the circle (Dominance-Submission) can be seen as "a status dimension which reflects the status position the speaker seems to be adopting"; and that the horizontal dimension (Hostility-Affection) can be seen as "reflecting the emotional attitude the speaker seems to be adopting (p. 266)." Foa (1961) and Adams (1964) have offered similar conceptualizations of the Leary dimensions.

Using this reformulation, Terrill and Terrill proceed to redefine each of Leary's octant categories in terms of status and emotional attitude. For example, the following formal definitions of AP (Managerial-Autocratic) and DE (Aggressive-Sadistic) behaviors are offered:

AP--takes dominant or high status position and expresses neutral to slightly positive emotional attitude to others or others' viewpoint . . .
DE--takes slightly high to equal status position and expresses negative attitude to others or others' ideas (p. 267).

Terrill and Terrill also point out that in the process of attempting actually to code speech samples certain speeches do not readily fall into any of the categories of the Leary system. They therefore propose the creation of "neutral" categories to make the scoring of responses more inclusive. Terrill and Terrill demonstrate good rater reliability using their system to rate 10 samples of interaction.

In the present study a rating system was devised keeping Terrill

and Terrill's reformulation of the Leary system in mind, but going a step further. Rather than recombining the primary variables of the Leary system into eight categories as Terrill and Terrill do, it seems more logical and direct to rate a sample of behavior on scales representing levels of each variable and to provide two numerical ratings for each sample of behavior. By doing so, both the quality and intensity of any response can be taken into account and even more precise ratings can be provided. Furthermore, numerical, rather than categorical, ratings can lead to more flexibility in data analysis and can provide for neutral ratings as well. As will be seen (p. 40), in the present study raters were trained to code behavior reliably using two 7-point scales: a Submission-Dominance scale and an Affection-Hostility scale.

Interpersonal Complementarity

Aside from proposing a system to classify interpersonal behavior, Leary (1957) has presented intriguing notions about the bases and manifestations of interpersonal behavior. However, Leary's presentation is often vague and rambling and lacks either firm theoretical or empirical grounding. Carson (1969) has added conceptual clarity to many of the ideas Leary presents by reformulating them and integrating them with theory and research in contemporary clinical and social psychology. Carson has thereby made the task of providing empirical validation of Leary's ideas both more possible and more necessary.

The concept of complementarity is central to Leary's thinking.

Leary proposes that for any response in the Interpersonal Behavior Circle there is another category of response which is "congruent" or "complementary." Phenomenologically, complementary responses are responses which represent the "natural" style of response to another style of response; and behaviorally they represent the style of response which is most frequently elicited by another style of response. Leary speaks of complementary responses as "interpersonal reflexes." "These reflexes are automatic and involuntary responses to interpersonal situations. . . . They are the individual's spontaneous methods of reacting to others (p. 96)."

Throughout one section of his book (Part IV; pp. 265-350), Leary offers hypotheses regarding the specific relationships among the categories in the Circle in terms of complementarity. (These hypotheses are collated by Shannon & Guerney, 1973, p. 143.) Leary illustrates with examples and clinical data how specific categories of response evoke or "pull" other categories of response. For example, in discussing Docile-Dependent behavior, Leary indicates:

Docility pulls strong helpful leadership from others. Dependence provokes nurturance. In the language of the circle, "JK pulls AP and NO from others."

If a person acts in a poignant, helpless, respectful manner he trains others to offer help, advice and direction. He who asks tends to get taught. These subjects tell others by means of their reflexes that they are weak and friendly. They thereby provoke others to be strong-and-friendly. . . .

These reciprocal pairings hold for brief encounters as well as durable interpersonal pairings. Poignant, tearful helplessness in the

first few seconds of an interaction provokes tenderness and guidance from another. Patients who present these reflexes in an initial psychiatric interview generate forces which may tend to pull assurance from the clinician (p. 293).

Carson (1969) proposes that all of Leary's hypotheses regarding complementarity can be summarized by one general hypothesis:

Complementarity occurs on the basis of reciprocity in respect to the dominance-submission axis (dominance tends to induce submission, and vice versa), and on the basis of correspondence in respect to the hate-love axis (hate induces hate, and love induces love) (p. 112).

This hypothesis will be subsequently referred to as the "complementarity hypothesis."

Empirical studies

There have been a number of studies which offer empirical evidence that is primarily confirming of the complementarity hypothesis. Before proceeding to discuss further aspects of complementarity, these studies will be reviewed.

Heller, Myers, and Kline (1963) trained actors to play the roles of friendly-dominant, friendly-submissive, hostile-dominant, and hostile-submissive clients. Each client-actor then participated in half-hour interviews with 34 interviewers-in-training who believed the actors to be actual clients. All interviews were observed through one-way mirrors by judges trained to rate behavior using the Leary system. Heller et al. hypothesized that:

1. Dominant client behaviors will evoke dependent [submissive] interviewer behaviors.

2. Dependent client behaviors will evoke dominant interviewer behavior.
3. Hostile client behavior will evoke hostile interviewer behavior.
4. Friendly client behavior will evoke friendly interviewer behavior (p. 117).

All of these hypotheses were clearly supported by the results, and this study offers strong support for the complementarity hypothesis.

Raush, Dittman, and Taylor (1959) studied the interpersonal behavior of six hyperaggressive boys, ranging in age from 8-10, involved in a residential treatment program. Each child was observed in a variety of behavioral settings as he interacted with both peers and adults. The interpersonal behavior of all individuals was rated, using the Leary system, and 16th ratings were combined into quadrant ratings for the purpose of data analysis. Observations were made shortly after the children entered the residential facility and were repeated after one and one-half years of treatment.

While Raush et al. (1959) were primarily interested in changes in the children's behavior, results at both points of observation support the complementarity hypothesis. For peer-peer interaction it was found that "passive-aggression [H-S] evokes dominant aggression [H-D] and that dominant-aggression evokes passive aggression (p. 25)." Complementarity of a different nature was evidenced in child-adult interactions. Adults "sent" primarily friendly-dominant behaviors and "received" primarily friendly-submissive responses. Furthermore, with at least child-adult interactions complementarity increased from the early to

later phase of interaction, suggesting that the changes in the children's behavior toward adults (increased friendly-submissiveness and decreased hostile-dominance) were initiated by adults, and that as interaction is prolonged it shifts in the direction of increased complementarity.

In a study by Raush, Farbman, and Llewellyn (1960), the behavior of control samples of nondisturbed boys was compared to the behavior of the hyperaggressive boys described above. In a small portion of the study, "behavioral reciprocity" (complementarity) is discussed; however, only hostile behavior is considered. In studying peer-peer interaction, although the proportion of behaviors in different samples differs, Raush et al. demonstrate that "among children aggression begot aggression: the averages of 'sent' hostile actions were paralleled the averages of 'received' hostile actions (p. 321)."

With child-adult interactions, the results are somewhat more complex, but still supportive of the complementarity hypothesis with regard to hostility. Adults interacting with all groups of children tended to "send" less hostility than they "received." However, "the group [of children] most hostile in their behavior received the most hostility from adults, the group least hostile received the least hostility, and the ordering of 'sent' and 'received' action in the other two groups were also parallel (p. 321)."

In a psychotherapy process study aimed at investigating the transfer of behavior from the family to the psychotherapeutic relationship, Mueller (1969) used the Leary system to score and compare the interaction of 39

clients and their therapists during initial and later phases of therapy. Proportions of behavior in each quadrant for each therapeutic dyad were correlated in two separate analyses: the first representing interaction during an initial interview, and the second representing interaction during a later interview.

During the initial interview, Mueller found significant positive correlations between the following types of client to therapist and therapist to client behaviors: H-D and H-D, H-D and H-S, H-S and H-S. In addition, Mueller found significant negative correlations between the following types of client to therapist and therapist to client behaviors: H-D and A-D; H-S and A-S; A-S and H-D; A-S and H-S; A-D and H-S. During the later interview the same relationships existed with the following exceptions: (a) H-S behaviors produced no significant correlations, (b) A-S and A-D behaviors were positively correlated, and (c) H-D and H-S behaviors were no longer correlated at a significant level.

Mueller's results clearly support the complementarity hypothesis with regard to Affection-Hostility; significant correlations consistently suggest that affection and hostility are related in a correspondent fashion. However, Dominance-Submission results are not always supportive of the complementarity hypothesis. During the initial interview some significant correlations point to a reciprocal relationship between dominance and submission, but others point to a correspondent relationship. During the later phase of the interview the relationship between dominance and

submission becomes more reciprocal (significant correlations pointing to a correspondent relationship decrease or drop-out), suggesting that over time complementarity with regard to dominance-submission increases. However, a significant positive correlation between H-D client to therapist and H-D therapist to client behaviors remains at a high level, suggesting that (contrary to the complementarity hypothesis) in some instances dominance may evoke dominance.

In the only study specifically undertaken to investigate interpersonal complementarity, Shannon and Guerney (1973) coded the interpersonal behavior of 14 groups of six college women as they participated in spontaneous discussions around specified topics. The discussions were tape-recorded on one track of a stereotape, and on the second track an observer designated by number which subject was speaking to whom. The tapes were transcribed and each uninterrupted verbal statement was coded into an octant of the Leary system.

The data were then analyzed to determine whether "certain responses would follow certain stimuli with a frequency greater than chance (p. 146)." Leary's general hypothesis that stimulus-response bonds exist among interpersonal reflexes was strongly supported, i.e. Shannon and Guerney demonstrated that certain kinds of interpersonal behaviors elicit other kinds of behaviors in return, with a frequency greater than chance.

Shannon and Guerney then analyzed their data to test Leary's

hypothesis about the nature of the links between specific categories of interpersonal response. Although Shannon and Guerney tested eight specific hypotheses proposed by Leary, we will discuss their results in terms of the more general complementarity hypothesis.

Hostile-submissive responses (behaviors representing the FG and HI octants of the Leary circle) were found to be extremely infrequent in all of the groups of subjects employed. Therefore, no conclusions could be drawn regarding the kinds of behaviors evoked by hostile-submissive behaviors. However, significant relationships were found upon investigating responses representing all other octants. These results can be summarized as follows: Friendly-dominant behavior was seen to elicit friendly-submissive behavior; friendly-submissive behavior was seen to elicit friendly-dominant behavior; and hostile-dominant behavior was seen to elicit hostile-dominant behavior.

These results clearly support the complementarity hypothesis with regard to hostility-affection: i.e. affection elicits affection and hostility elicits hostility. However, at least with the groups of subjects employed by Shannon and Guerney, support for the complementarity hypothesis with regard to dominance and submission was not as clear. In some instances (i.e. when coupled with affection), dominance and submission were seen to be related in a reciprocal fashion as predicted. However, when dominance was coupled with hostility, hostile-dominance rather than hostile-submission was elicited. In fact, Shannon and Guerney found that the

least frequent responses to hostile-dominant behavior were submissive ones. They conclude:

Apparently, at least in a group of one sex where there is no established authority and no pressure to solve a problem, the last thing that one can expect upon showing self-enhancing-competitive [octant BC; hostile-dominant] behavior is docility or dependency [submission] from another. Rather, the data suggest that a vicious cycle of self-enhancing behavior and competition, rejection and aggression is likely to occur (p. 147).

Similarly, submission was found to be an infrequent response to aggression-rejecting (octant DE; hostile-dominant) behavior (p. 148).

In general, the studies summarized above provide considerable support for the complementarity hypothesis as evidenced in a variety of settings and relationships. In all studies reviewed, responses on the hostility-affection dimension are seen to be related in a correspondent fashion, i.e. hostility evokes hostility and affection evokes affection. Results involving the dominance-submission dimension, however, are less consistent. While two studies (Heller, Myers, & Kline, 1963; Raush et al., 1959) clearly point to a reciprocal relationship between dominance and submission, two studies (Mueller, 1969; Shannon & Guerney, 1973) provide results to indicate that at least when coupled with hostility, dominance will elicit dominance rather than submission.

The function of complementary responses

According to interpersonal theorists, complementary responses are not only those responses most frequently elicited by other responses, they also serve an important function in interpersonal relationships. In

order to understand the function of complementarity, it is necessary to reflect briefly upon the interpersonal view of human interaction.

Sullivan (1953), whose thinking has influenced much of interpersonal theory, views the promotion of security and the avoidance of anxiety as the forces which motivate much of human interaction. Security is enhanced and anxiety is reduced when people receive confirmation from others of the concept of self which they derived from early childhood experiences. A relatively stable self-image, whether it be positive or negative, is seen to be an important precondition for internal security and integration. An individual's self-image is confirmed and maintained through the often subtle feedback he receives in relating to others. When an individual's self-definition is confirmed by another, an important interpersonal need is fulfilled and the relationship can proceed. When an individual's self-image is not confirmed, anxiety may be experienced and the relationship may be in danger.

According to interpersonal theorists, an individual's preferred style of interacting represents not only the stance he prefers to assume in relating to others, but it is also reflective of the way in which he defines and views himself. For example, an individual who responds in a submissive fashion is not only exhibiting a certain form of behavior, he is also implicitly saying to others to whom he relates, "I see myself as submissive in relation to you." Complementary responses are, therefore, seen as providing acceptance of that style of response to which

they are congruent. When an individual (A) assumes a submissive stance toward another individual (B), and B responds in a dominant fashion, B's dominant response confirms A's submissive stance. By responding in a dominant fashion, B indicates to A that he accepts the type of relationship B is proposing and that he too sees A as being submissive. It is only by receiving complementary responses that an individual's preferred style can be maintained and security can be insured.

Therefore, in order to avoid anxiety and enhance security, individuals will seek out others who respond to them in a complementary fashion. Not only do people prefer others whose style is complementary to their own, they will also attempt to elicit complementary responses from others whose style is not congruent to their own. According to Carson (1969), "The purpose of interpersonal behavior, in terms of security-maintenance functions, is to induce from the other person behavior that is complementary to the behavior preferred (p. 112)." The degree to which an individual attempts to elicit complementary responses in situations when they are not forthcoming varies according to the amount of anxiety generated when his self-image is not confirmed.

Interactions flow smoothly and contact between individuals is established when complementary responses follow one another. When, however, complementary responses are not evoked a state of tension exists and we expect the nature of the interaction to change. If, for example, A greets B in a warm, friendly fashion and B responds in a

cold, gruff fashion, we would expect A's next response to be at least a little less warm and friendly. And if B continues to respond coldly, we might expect the interaction tone initially set by A to change. We expect affection to elicit affection; and if it does not, over a series of responses, we expect the interaction to change to a more hostile one, or end. It is difficult to imagine an interaction proceeding for a long period of time without complementary responses following one another for a good part of it.¹

As was mentioned above, the effect of a complementary response is to imply acceptance of the interpersonal position established by the preceding response. Consequently, a noncomplementary response implies nonacceptance of the stance established by the preceding response and provides the context, or sets the stage, for a different kind of interaction. Therefore, when an individual responds in a congruent fashion he is "giving the message" that he prefers, or is at least willing, to assume the stance that complements the stance adopted by the other. And when he responds in an incongruent fashion he is giving the message that he prefers a different kind of interaction.

¹ It is, of course, conceivable that each individual will continue responding in his preferred style without regard to maintaining congruency, but this possibility is difficult to imagine as occurring with great frequency in reality. When such a possibility is imagined, it evokes images which are analogous to "parallel play." It seems to be an implicit rule of human interaction that in order to remain in contact congruency must be established and maintained, although the form of the congruency can change many times within an interaction.

Given that the establishment of periods of complementarity is a precondition for prolonged interaction, it is not difficult to imagine interactions that are smooth-flowing and mutually satisfying between individuals whose preferred styles are complementary: the style evoked by the preferred style of the one is the preferred style of the other. It is also possible to imagine interactions which are smooth-flowing and mutually satisfying between individuals whose preferred styles are not complementary, if we assume that neither individual is "absolutely and unswervingly committed to his preferred stance (Carson, 1969, p. 245)." If, for example, two people (A and B) prefer to be submissive and, hence, both require dominant responses to feel comfortable proceeding in their preferred styles, a mutually satisfying resolution can easily be established if both are willing to assume a dominant stance for part of the time.¹ It should be noted that the types of negotiation discussed above

¹ If we follow such an interaction for a period of time, it might look like this: A Sub-B Sub; A Sub-B Sub; A Sub-B Sub; A Sub-B Dom; A Sub-B Dom; A Sub-B Dom; A Sub-B Sub; A Dom-B Sub; A Dom-B Sub; A Sub-B Sub; A Sub-B Dom; etc. At the beginning of the interaction both A and B persist in assuming their preferred submissive stance. Finally, B relents and responds dominantly. After a while B communicates a desire to change by responding again in a submissive fashion; and this time A relinquishes the submissive position for a while. The above may be considered to be a simplistic example. Of course, more complex arrangements can be worked out; e.g. alternation may take place over whole series of interactions, content areas, etc. (Furthermore, in structured situations roles often take precedence over preference.) The point to be illustrated is that, in unstructured situations, each person is generally (at least implicitly) cognizant of the stylistic preference of the other, and when necessary, resolutions are implicitly negotiated so that each can assume his preferred stance for some part of the time.

generally occur implicitly and are rarely the subject of discussion. If, however, one person (or both people) is (are) unwilling to relinquish his (their) preferred stance(s), we can expect an interaction which is not long-lasting, or an interaction in which one of the individuals is subjugated to assuming an unpreferred stance as a condition for maintaining the interaction.

Disordered Evocation of Complementary Responses

Within an interpersonal framework, "well-adjusted" or "healthy" individuals are seen as people who have the capacity, "in appropriate situations and with modulated intensity (Carson, 1969, p. 245)," to assume the gamut of interpersonal stances. Although there may be one style they prefer to assume, "healthy" individuals display flexibility in their interpersonal relationships. Each style can be seen to be appropriate to certain situations, and adjustment to the interpersonal environment "demands a flexible generality of interpersonal response (Leary, 1957, p. 121)." Therefore, when placed in situations where a particular style is appropriate, or when faced with an individual whose preferred style is not complementary to his own, a "well-adjusted" person has the capacity to adopt a variety of stances and is not limited to the style he prefers. Leary (1957) makes these points quite clearly:

In any single day most individuals roaming around in their ecological space find suitable situations for expressing all sixteen interpersonal mechanisms . . . Most individuals, as we have seen, tend to select a limited set of preferred reflexes which operate spontaneously, but not with inflexible repetition. The average individual is still able

to call automatically any and all reflexes along the continuum to meet the exigencies of the environment (pp. 120-121).

"Disordered" or "pathological" individuals are seen as "'stuck' or 'hung up' in the maintenance of a particular interpersonal stance (Carson, 1969, p. 230)." Because their security is so tenuous, "disordered" individuals cannot relinquish their preferred stance even when their interpersonal environment clearly calls for them to do so. Such individuals "have abandoned all interpersonal techniques [stances] except one (Leary, 1957, p. 96)," and, regardless of the appropriateness of their response to the demands of the situation, or the response preference of others, they respond in the same fashion with rigid regularity.

Because of their tenuous security, "disordered" individuals have an incessant and perhaps insatiable need for self-image confirmation. The crucial factor becomes insuring that interactions will be self-Confirming. For the "disordered" individual congruence between self-image and external interpersonal events must be maintained at all costs. Carson (1969) describes a number of mechanisms which "disordered" individuals, as well as "normals,"¹ employ to maintain such congruence (pp. 239-249). For example, nonconfirming responses or relationships may be devalued, disattended to, or reinterpreted (or restructured) so as to be viewed as "really" meaning confirmation. However, both Carson and Leary see one mechanism--"disordered congruent response

¹The difference between "disordered" and "normal" utilization of these mechanisms is the intensity and extremity with which they are employed.

evocation"--as the basic and most consistent method by which disordered individuals maintain congruence.

Disordered congruent response evocation entails responding with such persistence, or inflexibility, in one stylistic mode that the other has few options but to respond in a complementary fashion and, thus, offer self-image confirmation. Through responding in an inflexible fashion, "disordered" individuals force others to respond to them in a similarly repetitive way. Whereas most people implicitly recognize (more or less) that others must be able to assume their preferred stance, "disordered" individuals do not. By being unable to (or by refusing to) recognize that others must be able to respond in their preferred fashion, the "disordered" individual "literally forces the other into a narrow complementary relationship-confirming stance (Carson, 1969, p. 245)." And, "the more extreme and rigid the person, the greater his interpersonal 'pull'--the stronger his ability to shape the relationship with others (Leary, 1957, p. 126)."

Carson describes two means by which a "disordered" individual evokes complementary responses: He can respond in his preferred style with such intensity that the other is "shocked" into responding in a congruent fashion; and/or he can be insidiously consistent, i.e. assume his preferred stance in a continuous fashion. The presumed effects of such behavior are clearly described by Carson (1969):

The intensity and/or rigidity of his [the "disordered" individual's] behavioral insistence tends to preclude a "negotiated settlement"

concerning the differential positions occupied by himself and the other. The other person's only available alternative, should his own Self be threatened by the demand made upon him, may be to escape from the relationship (pp. 245-246).

Otherwise, the other is forced to respond in a complementary fashion.¹

Given the conception of psychopathology described above, individual psychotherapy can be viewed as a process whereby clients are enabled to break out of rigid response patterns and learn and experience new ways of relating. The cardinal task of the therapist is to resist the "pull" of the client's attempts at eliciting self-image confirmation, thereby enabling the client to respond more flexibly. Whereas most people in the client's life have been subtly coerced into responding in a complementary fashion, the therapist must avoid getting pulled into the pathology-reinforcing context created by the client. Carson (1969) clearly summarizes this view:

The therapist must avoid the adoption of an interpersonal position complementary to and confirmatory of the critical Self-protective position to which the client invariably will attempt to move in the course of the therapeutic interaction. In other words, the therapist must be the one person in the client's life . . . who does not yield to the client's pressure to supply confirmatory information . . . to the latter's crippled Self (p. 280).

Empirical studies

A study by Dietzel (1972) offers empirical support for this conception of the therapeutic process. Dietzel investigated the level of client

¹Carson does not differentiate between the two means of complementary response elicitation, implying that both rigidity and intensity are equally effective means of evoking complementary responses.

and therapist complementarity during three stages of psychotherapy (beginning, middle, and end) for successful and unsuccessful outcome groups. Dietzel found that successful and unsuccessful groups differed primarily during the middle phase of therapy, where the levels of both client and therapist complementarity were significantly lower in the successful as opposed to the unsuccessful group. Dietzel concludes that these findings support the notion that, in order for behavior to change, disconfirming (noncomplementary) exchanges are necessary.

Although Dietzel found no difference in the level of therapist and client complementarity during the early stage of psychotherapy between successful and unsuccessful groups, he did find that during the early stage the level of therapist complementarity is directly related to the degree of manifest client maladjustment. This finding supports the notion that highly disturbed individuals are extremely effective at "pulling" self-image confirmation.

There are, however, no other empirical findings relevant to the interpersonal view of the way in which "disordered" individuals affect the responding of "nondisordered" others. And even Dietzel's finding does not indicate that it is the degree of inflexible responding--disordered congruent response elicitation--which accounts for differences in the level of complementarity. The latter can only be inferred.

Two other studies should be mentioned before proceeding to describe the aims of the present study. McKenzie (1968) compared the

interpersonal behavior of 10 normal and 10 clinic (disturbed) families consisting of three members (mother, father, and son). Family dyads (mother-father, mother-son, and father-son) were observed for 15 minutes as they discussed a predetermined topic. Sessions were observed and recorded, and the Leary system was used to rate each interaction sequence.

Based on Leary's notions about the inflexibility of disturbed interactants, McKenzie predicted that members of clinic families would display a narrower band of interpersonal behavior than normal families. In addition, she predicted that clinic family members would display more repetitive behavior than normal family members. Neither of these hypotheses were confirmed by the data collected. This study could be seen to disconfirm Leary's notions about the nature of disturbed interaction, at least as it applies to family interaction; however, McKenzie offers explanations as to why her methodology may not have been sensitive enough to reveal differences between family groups even if they existed.

In contrast to the study by McKenzie, a study by Raush, Farbman, and Llewellyn (1960, cited above on p. 15) supports the notion that disturbed individuals can be differentiated from normals by the degree of flexibility evidenced in their responding. Raush et al. compared the behavior of six hyperaggressive boys involved in a residential treatment program with the behavior of control groups of "well-adjusted" boys

living in the same residential setting for a 2 1/2-week camp experience. The behaviors of the boys were coded on the Leary system as they interacted with peers and adults in a variety of social settings having different demand characteristics (e.g. breakfast and unstructured group activity).

Findings indicated that the disturbed boys, to a greater extent than the normal boys, manifested the same interpersonal behaviors regardless of the situations they were in or the type of individual with whom they interacted. Furthermore, in the course of treatment the disturbed boys increased their ability to act differently in different situations and were able to make sharper differentiations between peers and adults. Based on these results, the authors suggest that lack of responsiveness to situational and interpersonal variables is a characteristic of psychological disturbance, a view which is quite consistent with the assumptions made by Leary and Carson.

Complementarity: summary and conclusions

Complementary responses are not only those responses which are elicited by other responses. They can also serve to confirm the self-image and enhance the security of the person "receiving" them. Consequently, people will strive to "receive" responses complementary to their preferred style from those with whom they interact.

Interactions flow smoothly when complementary responses follow

one another, and tension exists when they do not. Most people have the flexibility to relinquish their preferred stance when the situation calls for it, or in order to provide confirmation to individuals whose preferred style is not complementary to their own. "Disturbed" individuals, however, have an extremely limited stylistic repertoire and respond in the same mode regardless of the situation they are in, or the interpersonal needs of others with whom they interact. Because of their tenuous security, disordered individuals respond with such inflexibility that others with whom they interact, unless they have particular expertise, are forced to provide continual confirmation by responding in a complementary fashion. The primary way in which disordered individuals affect the responding of others is to decrease their degree of flexibility by "pulling" responses which are more complementary and self-Confirming.

There is a good deal of evidence to support the complementary hypothesis, some evidence to indicate that lack of flexibility is related to psychological disturbance, and some evidence that degree of disturbance is related to the level of complementary responding elicited. However, there is no evidence to indicate specifically how inflexible responding affects others. Furthermore, most of the research done using the Leary system has been undertaken in help-seeking contexts and has focused on the relationships that disordered individuals engage in with helping agents, or with one another.

There have been no studies done to investigate the day-to-day interactions of disordered individuals with others who have no apparent disturbance. However, if it can be shown that disordered individuals can control the responses they receive from nondisturbed others, then we may be able to explain better why psychological disturbance is so difficult to change: i. e. the responses received in day-to-day interaction are confirming of the disturbed individual's self-image, and thus reinforcing to his pathology.

Aims and Overview of the Present Study

The chief aim of this experiment was to undertake empirical investigation of some of the theoretical conceptions discussed above. Specifically, an attempt was made to answer the following questions: (a) Does an individual whose responding is primarily limited to one interpersonal style (a "fixated" individual) elicit different interpersonal behaviors from others than an individual whose stylistic orientation is more flexible? (b) If so, what is the nature of this difference, in terms of how others behave toward each type of individual?

The general experimental procedure entailed presenting "normal" groups of subjects with sets of tape-recorded statements which were prepared to simulate "fixated" interactants (whose responding was primarily limited to one stylistic mode) and "flexible" interactants (whose responding was more variable). Subjects were told to respond to the statements

of the tape recordings as if they were interacting with a real person.

The study was limited to investigating just two stylistic modes--Hostile-Dominant and Affectionate-Submissive. However, all tapes were controlled for content so that only the style of the statements on the tapes differed. Furthermore, the first three and last three statements on experimental ("fixated") and control ("flexible") tapes were identical. After subjects finished responding to the tapes, their responses to the first three and last three statements were rated on Dominance-Submission and Hostility-Affection scales in order to assess the nature of their responding at the beginning and the end of the interaction.

Transposing the theoretical notions discussed concerning the nature of complementarity and the impact of inflexible responding into the framework of this experiment, we can make the following predictions: (a) Because of the hypothesized "reflexive" nature of interpersonal responses to interpersonal stimuli, complementarity should be evident in response to given statements made in the same style by either a "fixated" or a "flexible" interactant. (b) However, as the interaction proceeds from beginning to end, the fixated interactant should "pull" complementary responses more successfully than the flexible interactant. (c) By the end of the interaction, when comparing the responses of subjects to identical statements made by "fixated" versus "flexible" interactants, differences should be noted; i. e. subjects responding to "fixated" interactants should be responding in a less variable and more complementary fashion than

subjects responding to "flexible" interactants.

Hypotheses

Bearing in mind that the particular interpersonal styles under study were Hostile-Dominant (H-D) and Affectionate-Submissive (A-S), the above predictions can be restated as the following formal hypotheses:

Hypothesis 1. When comparing the responses of groups of subjects to individuals making H-D and A-S statements:

- (a) Subjects will respond differently to H-D statements than to A-S statements on the D-S dimension.
- (b) Subjects will respond more submissively to H-D statements than to A-S statements.
- (c) Subjects will respond differently to H-D statements than to A-S statements on the A-H dimension.
- (d) Subjects will respond with more hostility to H-D statements than to A-S statements.

This hypothesis is based upon Leary's prediction that particular kinds of interpersonal responding elicit particular other kinds of responding and upon Carson's complementarity hypothesis. In this paper we will refer to the above set of predictions as the "style hypothesis." In analyzing the results, we will focus on comparing the style of responses elicited by H-D vs. A-S stimulus items.

Hypothesis 2.

(a) The variability of responses of subjects interacting with fixated interactants will decrease from the beginning to the end of the interaction, on the dominance-submission dimension, to a greater extent than the variability of responses of subjects interacting with flexible interactants.

(b) The variability of responses of subjects interacting with fixated interactants will decrease from the beginning to the end of the interaction, on the hostility-affection dimension, to a greater extent than the variability of responses of subjects interacting with flexible interactants.

This hypothesis is based upon the notion that over time inflexible responding elicits similarity inflexible responding. In this study we will refer to the predictions relating to the variability of subjects' response as the "variability hypothesis." We will attempt to assess the validity of this hypothesis by comparing changes in variability of response received by fixated vs. flexible interactants.

Hypothesis 3. When comparing the responses of groups of subjects to fixated vs. flexible interactants making H-D and A-S statements, over time:

(a) Fixated H-D interactants will elicit more extreme responses on the D-S dimension than flexible H-D interactants.

(b) Fixated H-D interactants will elicit more extremely submissive responses than flexible interactants making the same H-D statements.

(c) Fixated H-D interactants will elicit more extreme responses on the A-H dimension than flexible H-D interactants.

(d) Fixated H-D interactants will elicit more extremely hostile responses than flexible interactants making the same H-D statements.

(e) Fixated A-S interactants will elicit more extreme responses on the D-S dimension than flexible A-S interactants.

(f) Fixated A-S interactants will elicit more extremely dominant responses than flexible interactants making the same A-S statements.

(g) Fixated A-S interactants will elicit more extreme responses on the A-H dimension than flexible A-S interactants.

(h) Fixated A-S interactants will elicit more extremely affectionate responses than flexible interactants making the same A-S statements.

This hypothesis is based on the notion that, because of their insistent responding, individuals with a restricted stylistic repertoire limit the responding of others by forcing them into a "complementary relationship-confirming stance." In this study we will refer to the above hypothesis as the "restriction hypothesis." In attempting to assess its validity, we will compare the change in the magnitude of response elicited by fixated vs. flexible H-D and A-S interactants from one phase of the interaction to another.

CHAPTER II

METHOD

Overview of Procedures

In this chapter all experimental procedures will be described in detail. As previously mentioned, the general experimental procedure entailed presenting "normal" groups of subjects with tape-recorded statements which were prepared to simulate "fixated" and "flexible" interactants. Subjects were told to respond to the statements on the tape recordings as if they were interacting with real people. Subsequently, the responses of subjects selected to interact with fixated interactants were compared to the responses of subjects selected to interact with flexible interactants.

The first step in the experimental procedure involved preparing stimulus tapes controlled to provide contexts for testing the hypotheses of this experiment. In the first section of this chapter, the procedure utilized for preparing the stimulus tapes will be described in detail.

The second step in the experimental procedure was to collect the data necessary to test the hypotheses. In this experiment the primary

data consisted of subjects' responses to selected statements made by either fixated or flexible interactants. During an experimental session, 80 female undergraduate students listened and responded to stimulus tapes and provided other relevant data necessary for testing the hypotheses. In the second section of this chapter, a detailed account of procedures utilized for data collection will be presented.

The third step of the experimental procedure was to devise a means for coding the subjects' responses to the tape-recorded statements in a manner amenable to statistical testing of the hypotheses. In the third section of this chapter, descriptions of the following procedures will be provided: (a) the manner in which subjects' responses to the tape recordings were rated; (b) the manner in which ratings were transformed into the major dependent measures utilized for testing the hypotheses; and (c) the procedures by which other dependent measures utilized in the study were selected.

Procedures for the Preparation of Stimulus Materials

Eight tape recordings, containing 36 statements each, served as the stimulus materials utilized in this experiment. Statements comprising the different tapes varied in style, so that four of the recordings were constructed to simulate fixated interactants and four of the recordings were constructed to simulate flexible interactants.

The same actress functioned as the interactant on all stimulus

tapes. This was necessary so that differences in the subjects' responses to each type of stimulus material could be confidently regarded as a function of the types of statements uttered by the actress. By employing the same actress to record all statements, any effects elicited by qualities of the actress which were not systematically varied should be constant across conditions. In addition to keeping the interactant on each tape constant, each tape was matched for content. This control was necessary so that differences in the subjects' responses to each type of stimulus material would have to be seen as a function of the style in which the statement was made, rather than the information which the interactant was conveying.

Each of the eight stimulus tapes was prepared by combining sets of 36 statements, drawn from a pool of 160 statements. Although the eight stimulus tapes contained a total of 288 statements, only 82 different statements were needed to prepare all eight tapes. This was the case since some of the statements were repeated on two or more of the tapes. The procedure used to prepare the stimulus tapes will be summarized below, and then each step in the process of tape preparation will be detailed in the subsections that follow.

An actress was asked to perform a large number of statements falling within each of the four stylistic categories described by Carson: Affectionate-Dominant (A-D); Hostile-Dominant (H-D); Affectionate-Submissive (A-S); Hostile-Submissive (H-S). These statements were

tape-recorded, and they comprised what will be subsequently referred to as the "original stimulus tape."

The "original stimulus tape" was then rated by trained raters. Based on the ratings, eight sets of 36 responses each were combined in a systematic fashion and re-recorded on separate tapes. These eight sets of 36 responses each served as the stimulus tapes to which different groups of subjects were asked to respond. Four of the eight tapes were prepared to simulate a "fixated" interactant. These tapes will be referred to as the "experimental stimulus tapes." The other four tapes were prepared to simulate a "flexible" interactant, and these tapes will be referred to as the "control stimulus tapes."

The rating system and the raters

As mentioned previously (p. 11), three raters were trained to rate samples of behavior using two 7-point scales: a Submission-Dominance scale and an Affection-Hostility scale. A representation of each scale is provided in Figure 2. As illustrated, ratings of 1, 2, and 3 on the Submission-Dominance scale represent high, medium, and low levels of submission; ratings of 5, 6, and 7 represent low, medium, and high levels of dominance; and a rating of 4 provides responses which are neutral with regard to Submission-Dominance. The Affection-Hostility scale is similarly constructed, with a rating of 1 indicating a high level of affection, a rating of 7 indicating a high level of hostility, and a rating of 4 indicating

Submission		Neutral			Dominance		
1	2	3	4	5	6	7	
High	Mod.	Low		Low	Mod.	High	
Affection			Neutral			Hostility	
1	2	3	4	5	6	7	
High	Mod.	Low		Low	Mod.	High	

Figure 2. Schematic Representation of the Submission-Dominance and Affection-Hostility Rating Scales.

a neutral response. A rater's manual was prepared providing the same illustration of the scale which appears in Figure 2, comprehensive definitions of the dimensions and the levels of each dimension, sample statements with ratings, and other aids in using the system. (The complete rater's manual appears in Appendix I.) The same rating system was utilized and the same raters were employed in all phases of the experiment which entailed rating.

In a previous pilot study, the two scales utilized in the present experiment proved to have an average inter-rater reliability of approximately .85, using six raters.¹ In the pilot study, ratings were made from written responses to items similar to those which appeared on the tapes used in the present experiment. It was assumed that ratings of tape recordings would provide even higher inter-rater reliability, since in the previous study the most consistent difficulty raters experienced was uncertainty about "how the response was said." It was felt that this difficulty would be minimized by using tape recordings, since judgments about how a statement was being said would not have to be inferred. Therefore, in the present study three raters were employed instead of six.

The raters employed in the present experiment knew nothing about the objectives or procedures of the study except that they entailed rating

¹Inter-rater reliability was determined utilizing an analysis of variance technique described by Winer (1962). The same technique was used to estimate reliability in the present study (see p. 73).

subjects' responses to statements made by an actress believed to be a peer. Each of the raters had at least three years of graduate training in clinical or personality psychology, but none of them had any more than limited familiarity with the Leary system before being employed. Two of the raters were female and one was male.

Before rating any experiment-related material each rater was given a copy of the rater's manual, which they were instructed to read carefully, and a sample tape which they were asked to rate once they felt sufficiently familiar with the rating system. (The sample tape contained 25 responses made by three undergraduate students to statements which did not appear on any of the experiment-related materials.) After rating the sample tape, the raters met in a group with the experimenter during which time questions were answered, ratings of the sample tape were compared, and disagreements in rating were discussed and worked out. At the end of this session raters were asked not to discuss anything about the rating task with one another.

The stimulus interactant

The person employed to serve as the actress, or stimulus interactant, was a 30-year-old female clinical psychologist who had familiarity with the Leary system and had done some previous research in the area of interpersonal style. In addition, she had had experience with stage acting. Consequently, it was not difficult for her to assume a variety of

interpersonal stances. In addition, she was able to portray convincingly an undergraduate co-ed.

Preparation of the original stimulus tape

The actress referred to above was refamiliarized with the Leary system through reading parts of Leary's book and through discussions with the experimenter. Once the actress felt sufficiently familiar with the Leary system, she spent time with the experimenter practicing the assumption of the four basic styles described above. The tones of voice and types of expression associated with each style were particularly emphasized during these practice sessions.

The actress and the experimenter then met for a series of brainstorming sessions in which they generated groups of four statements which conveyed the same information, but differed in style. Each statement in a group represented one of the four basic styles (A-S; A-D; H-S; and H-D); and because they conveyed the same information, they were considered to be matched for content. Furthermore, the statements comprising each group were considered to be appropriate in content for unstructured interaction between undergraduate co-ed peers. A total of 160 statements (40 groups of four statements each) were generated.

The following four responses provide an example of a stimulus group:

1. I'm so glad you made it. You're late and I was worried about you. (Style: A-D)

2. Wow (sigh). I'm so glad you made it. You're late and I was so worried. (Style: A-S)
3. I'm glad you decided to make it. You're late again and I was worried. (Style: H-D)
4. Oh, well, you did make it. I'm glad about that. I guess you know you're late, and you had me so worried. (Style: H-S)

Each response provides essentially the same information. But when said in different tones of voice, with different phrases or words emphasized, they come across differently and convey different messages.

When a large number of statements were generated, each statement was written on a separate card, and a tape recording of the actress saying each statement was made. In order to relieve the actress of the difficulty of constantly switching from one style to another, the cards were sorted into four groups, each group composed of those statements to be made in a given style. Each group of statements was recorded on a different day and on a separate tape, and each statement was performed several times by the actress.

After each tape was completed it was submitted to an editor. The person serving as editor had had amateur acting and directing experience and had been employed as a psycho-dramatist in a clinical setting. The editor was familiarized with the Leary system, but was not involved in the process of item construction, or in the process of recording the stimulus statements.

After each tape was completed, the editor was instructed to listen to each statement on the tape and was asked to select what she felt to be

the best performance of each statement. Appropriateness of style adoption, convincingness of portrayal, and relevance of idiomatic expression to the undergraduate population were the criteria she used for selection. The editor was also asked to indicate when she felt that no performance of a given statement was adequate. In such instances, the editor was asked to give suggestions for improving the performance. In some instances these suggestions involved changing or rearranging words, and in others they involved the actress altering her tone of voice, rate of speech, intonation, emphasis, etc.

After the editor critiqued a tape, her judgment of the best performance of a statement was utilized as the criterion for its inclusion on later tapes. In those instances in which she felt that no performance of a statement was adequate, her suggestions for improvement were noted. The actress then attempted to perform the statement several times again, and her revised enactment was submitted to the editor, who again made adequacy judgments.

When an adequate performance of each of the 160 statements was attained, the content of each statement and its position on the preparation tapes was written on an index card. These cards were then randomized and the statements they represented were then rerecorded in the random order generated. Statements were rerecorded off the preparation tapes onto a single tape: the "original stimulus tape."

This "original stimulus tape" was then presented to the raters so

that a standardized, consensual judgment of the adequacy of the statements could be obtained. The raters independently rated each statement on the tape. In order for a response to be selected for inclusion on the stimulus tapes presented to the experimental subjects, all raters had to agree that this response fell in the same stylistic category. Inconsistently rated statements were either excluded from the final tapes, or they were reevaluated by the editor, reenacted by the actress, and resubmitted to the raters. However, no inconsistently rated response was submitted to the raters more than one time for rerating. By using this procedure, a sufficient number of reliably rated statements were available to construct all stimulus tapes.¹

Through a process of ordering and rerecording, reliably rated statements from the original stimulus tape were used to prepare the experimental and control stimulus tapes. The experiment was limited to the study of just two of the four styles--Hostile-Dominant and Affectionate.

¹ According to the criteria set forth in the Rating Manual (Appendix II), responses rated 1, 2, or 3 on the Submission-Dominance scale were considered "submissive" responses, while responses rated 5, 6, or 7 on this scale were considered "dominant" responses. Responses rated 1, 2, or 3 on the Affection-Hostility scale were considered "affectionate" responses, while responses rated 5, 6, or 7 were considered "hostile" responses. Therefore, for example, a statement receiving a rating of 5-3 from Rater 1, 6-2 from Rater 2, and 5-2 from Rater 3 was considered to be consensually viewed as a Dominant-Affectionate response, and could be included on a final stimulus tape. However, another response receiving a rating of 5-3 from Rater 1, 5-5 from Rater 2, and 5-2 from Rater 3 was considered to be ambiguous, because they were not consistently viewed as falling in the same stylistic category (while Raters 1 and 3 saw the response as A-D, Rater 2 saw it as H-D).

Submissive. Although it might have been desirable to prepare tapes so that hypotheses could be tested for each of the four basic styles, considerations of the amount of time and the number of subjects that would have been needed made such an undertaking impossible.

Preparation of experimental and control tapes

In this subsection, characteristics common to experimental and control tapes will be considered and the preparation of both types of tape will be described. A schematic representation of all tapes is presented in Figure 3. Reference to this figure will be helpful to the reader as he proceeds reading the material that follows. (A verbatim rendering of the statements comprising each stimulus tape appears in Appendix II.)

Each final tape consisted of 36 interactant statements (items) selected from the "original stimulus tape." After each statement there was a 10-second lapse, during which time no verbalization was recorded on the tape. After each lapse a tone was recorded onto the tape, and immediately after the tone the next statement followed. Ten-second lapses were necessary to allow just enough time for subjects to respond to each statement. The tones were necessary to alert subjects to the fact that the next statement was about to occur.

Each subject participating in the experiment listened and responded to only one tape. Subjects were told that the statements on the tapes were taken from actual interactions, and they were asked to respond to

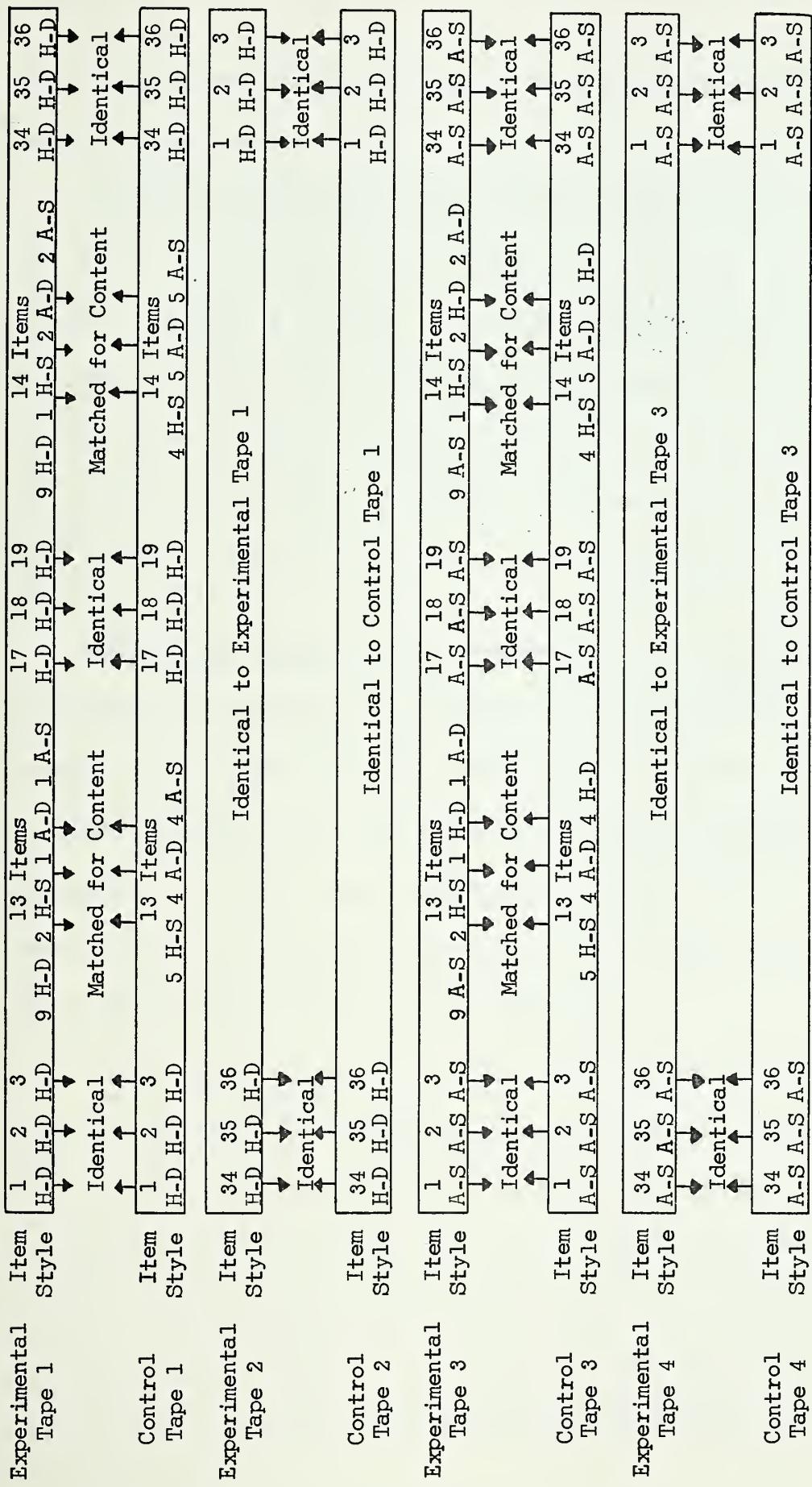


Figure 3. Schematic Representation of Stimulus Tapes

these statements as if they were involved in an interaction with the person on the tape.

Subjects' responses to the first three, last three, and middle three items were rated, and ratings of these responses were compared in order to assess changes in subjects' mode of responding from the beginning to the end of the interaction. All items across tapes were either identical or controlled for content with the exception, in some instances, of the first and last three items. In addition, the first three and last three items were controlled for intensity, as described below.

Experimental tapes. Experimental tapes were constructed to simulate "fixated" interactants. In order to do so, 75% (27) of the items were of one stylistic mode, while the remaining 25% (9 items) were equally divided among the other three modes. There were two kinds of experimental tapes: (a) H-D tapes (experimental tapes 1 and 2), in which 75% of the items were rated H-D, and (b) A-S tapes (experimental tapes 3 and 4), in which 75% of the items were rated A-S.

Experimental tapes 1 and 2 were identical, except that the first three items of tape 1 were the last three items of tape 2 and vice versa. This precaution was necessary to insure that differences between responses to the first and last three items within a tape were due to the position, rather than the content, of those items. The structure of experimental tapes 3 and 4 was the same as the structure of experimental tapes 1 and 2. However, tapes 3 and 4 contained 75% of items in the A-S

mode rather than in the H-D mode.

Control tapes. Control tapes were constructed to simulate a "flexible" interactant. In order to do so, 25% of items of all control tapes were of each stylistic mode. Each control tape was matched with an experimental tape, and, therefore, there were four control tapes. (Matched tapes are tapes with the same number; e.g. experimental tape 1 is matched to control tape 1.) The first three, middle three, and last three items of a pair of matched tapes were identical in style and content. For example, on experimental tape 1 the first three, middle three, and last three items were identical to the first three, middle three, and last three items on control tape 1. Furthermore, on both of these tapes the items in question were rated H-D so that control tape is considered to be a control H-D tape. Similarly, control tape 3 is considered to be a control A-S tape, control tape 2 is a control H-D tape, with beginning and end items from control tape 1 reversed, and control tape 4 is a control A-S tape with beginning and end items from control tape 3 reversed.

Matching tapes for content. While the first three, middle three, and last three items on matched tapes were identical in style and content, intervening items differed in style. However, intervening items were always matched for content and arranged in the same sequence. In addition, H-D and A-S experimental tapes were also matched for content so that similarly numbered items were matched for content across all tapes.

Therefore, no matter which tape a subject listened to, she always responded to the same content in the same sequence. (Intentionally reversed beginning and end items are, of course, an exception.)

Controlling the first three and last three items for intensity. In addition to controlling for content, efforts were made to control the first three and last three items for intensity. This precaution was necessary since, if the first three and last three items were not of the same intensity, differences in the subjects' responses to these items might occur due to the differences in intensity and thereby interfere with the hypothesized effects. If the first three and last three items were of the same intensity, any differences in response to these items would have to be seen as resulting from the effect of intervening items.

Statements chosen for the first three and last three items were statements consistently rated as being of low intensity (e. g. item one performed in the A-S mode was rated 3;3 by all three raters; and item one performed in the H-D mode was rated 5;5 by all three raters). Low intensity items were used because such items should not by themselves have a strong pull. High intensity items should have a stronger pull and might, therefore, elicit highly complementary responses, even at the beginning of the interaction. The middle three items were not controlled for intensity and were necessarily rated as being of higher intensity than the first three and last three responses.

Model of stimulus tapes

Figure 4 provides a matrix model which illustrates similarities and differences between all tapes.

Cells 1, 3, 5, and 7 represent tapes in which the first three, middle three, and last three statements were performed in the H-D mode. Cells 2, 4, 6, and 8 represent all tapes in which the first three, middle three, and last three statements were performed in the A-S mode.

Cells 1, 2, 3, and 4 represent fixated or experimental tapes--75% of the total number of statements on each of these tapes were performed in the same stylistic mode. Cells 5, 6, 7, and 8 represent flexible or control tapes--25% of the total number of statements on each of these tapes were performed in each of the four stylistic modes.

Cells 1, 2, 5, and 6 represent tapes in which items 1, 2, and 3 appear at the beginning and items 34, 35, and 36 appear at the end. Cells 3, 4, 7, and 8 represent tapes in which items 34, 35, and 36 appear at the beginning and items 1, 2, and 3 appear at the end.

Procedures for Data Collection

The eight tapes described in the previous section served as the stimulus materials to test the major hypotheses of this experiment. During experimental sessions, subjects listened and responded to these tapes. Ten subjects listened to each tape. Subjects listening to a given tape were randomly selected from an available population. In this

	Hostile-Dominant (H-D)	Affectionate-Submissive (A-S)
	(1)	(2)
Order 1 (Forward)	<u>Fixated (Experimental)</u> <u>Tape 1</u> 75% of items H-D Items 1, 2, 3 (Cluster A) at beginning Items 34, 35, 36 (Cluster B) at end	<u>Fixated (Experimental)</u> <u>Tape 3</u> 75% of items A-S Cluster A at beginning Cluster B at end
Fixated	(3)	(4)
Order 2 (Backward)	<u>Fixated (Experimental)</u> <u>Tape 2</u> Identical to Fixated Tapes, except: Cluster B at beginning Cluster A at end	<u>Fixated (Experimental)</u> <u>Tape 4</u> Identical to Fixated Tape 1, except: Cluster B at beginning Cluster A at end
	(5)	(6)
Order 1 (Forward)	<u>Flexible (Control)</u> Tape 1 25% of items in each style First three, middle three and last three items, all H-D and all identical to corresponding items on Fixated Tape 1	<u>Flexible (Control)</u> Tape 3 25% of items in each style First three, middle three and last three items, all A-S and all identical to corresponding items on Fixated Tape 3
Flexible	(7)	(8)
Order 2 (Backward)	<u>Flexible (Control)</u> Tape 2 25% of items in each style First three, middle three and last three items, all H-D and all identical to corresponding items on Fixated Tape 2	<u>Flexible (Control)</u> Tape 4 25% of items in each style First three, middle three and last three items, all A-S and all identical to corresponding items on Fixated Tape 4

Figure 4. Model of Stimulus Tapes.

section we will describe the four-phase experimental session and thereby illustrate the procedures employed for data collection. But before doing so, characteristics of the subject population and the experimental setting will be considered.

Subjects

The subjects in this experiment were 80 female students enrolled in introductory psychology classes at Duke University during the spring and summer semesters of 1973. Sixty-five of the subjects were run during the spring semester. These subjects were required to spend six hours participating in experiments in order to receive course credit. Experimenters placed sign-up sheets with titles of their experiments on a bulletin board outside the psychology lecture hall, and during the semester subjects signed up for the appropriate number of experiments. The present experiment was entitled "Social Interaction" with a notation that only female subjects could participate. Subjects received one hour of experimental credit for their participation.

The additional 15 subjects whose data were utilized in this experiment were enrolled in introductory psychology classes during the summer semester of 1973. For these subjects, experimental participation was not part of the course requirement. Consequently, these subjects were directly recruited from psychology classes and were compensated by paying them \$2.00 for the hour they spent participating in the experiment.

At least one summer session subject but no more than three was included in each of the eight groups.

A total of 99 students served as subjects for the experiment. However, the data of 19 of these subjects had to be eliminated, either because a subject did not respond to all of the first three and last three items, or because equipment failure made it impossible for a subject to hear the entire tape.

The 80 subjects included in this experiment ranged in age from 17 to 23 years. Nine of the 80 subjects did not record their ages. Of those subjects who did record their ages, 64 were either 18, 19, or 20. Two of the subjects were Black, one was Chinese-American, and the rest were Caucasian.

The experimental setting

All of the data utilized in this experiment were collected during 36 one-hour experimental sessions. This author served as the experimenter for all subjects. Experimental sessions were held in a suite of rooms in the Psychology Building at Duke University known as the "Social Psychology Laboratory." Each room in this laboratory has a speaker which is connected to a master unit. By plugging a tape recorder into the master unit, the content of a tape recording can be piped into any room in the laboratory. In addition, four of the rooms in the laboratory are equipped with tape recorders which can be utilized to record any speech transpiring.

With these facilities, up to four subjects could participate in the experiment at the same time. During an experimental session one of the eight experimental and control tapes could be transmitted into each room in which a subject was seated. The actual number of subjects participating in a given experimental session depended upon how many subjects signed up and appeared for a given hour.

Experimental session: phase one--
ICL and instructions

When all subjects scheduled for an experimental session arrived, these subjects were seated around a table and each individual was given an Interpersonal Checklist (ICL) to complete with instructions to describe herself. The ICL is a test which was derived by Leary (1956) to measure individual interpersonal style according to the Leary system. The ICL is a list of 128 words and phrases descriptive of interpersonal behavior. Subjects are asked to read through the list quickly and to check any item they feel to be descriptive of themselves. From an individual response to the ICL, two scores--a Dominance score and a Loving score--can be derived, and a measure of his interpersonal style can be determined. (Although the above-described form of the ICL was administered, these data were not utilized in the present study.)

After completing the ICL, subjects were given the following instructions by the experimenter to prepare them for the next two phases of the experiment:

In this experiment you will be asked to listen to a tape, and while doing so, to respond to the person on the tape.

In an experiment we did last semester, we asked subjects to respond to a large number of social situations, as if they were in those situations, and we recorded these subjects' responses. In this experiment we are interested in seeing how people respond to certain of those subjects. We are interested in what kinds of responses these subjects elicit from other people.

For this experiment, you will be interacting with the same subject over 36 separate situations. We would like you to imagine that you are interacting with a real person. Really put yourself in the situation and respond like you would if there was a real person in the room with you.

So, you will be asked to participate in 36 interactions with the same person. In each interaction you will hear that person make a brief statement--no more than 3 sentences. Immediately after that person finishes you will be expected to respond to what was just said. In order to have a record of the interactions, the conversation you will be engaged in will be recorded.

As I said, it is very important that you get involved in each interaction and respond as if it were really taking place. In order to do this, it may help if you close your eyes while the person is talking and imagine a real person in the room with you.

You will have only a brief time to respond to each statement, so it will be necessary for you to respond quickly with the first thing that comes to mind. If you want to refer to the person on the tape by name, just use any name that comes to mind.

So, you will hear a person make a statement and then you'll have a brief period of time to answer. Then you will hear a tone--a beep. This tone is a signal that the next statement is about to come. If you are not finished when you hear the beep, just stop and wait for the next statement. You will have exactly the same amount of time to respond to each statement.

When you are responding to the person, please avoid giving simple yes or no answers or making one word responses like "okay" or "sure." Give as complete a response as possible. If in a particular situation you would not make a verbal response, then describe in words as completely as possible what you would do and how you would feel. But it is best to respond verbally with the first thing that comes to mind.

Are there any questions?

The experimenter answered any questions subjects raised, and then proceeded with the following instructions:

You will now each go to a separate room, and before the experiment begins I will come around to each room and give each of you some practice with the procedure of responding to statements on a tape; this will allow you to become comfortable with the procedure and assure me that you understand the instructions. For this practice session we will use a short practice tape. The practice tape will be just like the longer tape you will listen to; the kinds of statements are similar and the amount of time you have to respond will be the same. However, the person on the short practice tape will be different from the person on the longer tape.

Experimental session: phase two--
practice session

After the instructions were presented, each subject was taken to a separate soundproof room where phases two and three of the experimental session were held. The purpose of the practice session (phase two) was to allow subjects to become comfortable with the task of responding to tape-recorded statements. (This was especially important since the subjects' first three responses were utilized as data for the experiment.) The practice session also enabled the experimenter to make sure that subjects understood the experimental task and followed instructions accurately. When the above did not occur, the experimenter was in a position to provide feedback to correct subjects' misconceptions about the proper way to proceed.

During the practice session the experimenter interacted with subjects individually. He entered each room in which a subject was waiting, with a battery-operated cassette recorder and the practice tape. The practice tape contained six statements and was similar in format to the

longer experimental and control tapes: Statements on the practice tape were performed in discernible interpersonal styles; the amount of time between statements on the practice tape was the same as on the longer tapes; the same tone was used on the practice tape as on the longer tapes; statements on the practice tape were appropriate for peer interaction; subjects were asked to respond aloud to the practice tape, as they would to the longer tapes. However, the practice tapes differed enough from the experimental and control tapes so that biasing of the subjects' responses to these latter tapes would not be likely to occur: An actor, rather than an actress, performed the practice tapes; only two of the six statements on the practice tape were in the H-D and A-S mode; the practice tape was presented clearly as a "practice tape." (The procedure for preparing the practice tapes and the contents of these tapes are presented in Appendix III.)

After entering the room with the practice tape, the experimenter greeted the subject, briefly reiterated the instructions given previously, and proceeded to play the practice tape. After a subject responded to each statement, the experimenter stopped the tape and gave the subject feedback to her response. Depending on the nature of the subject's response, one of the following six statements was used to give feedback:

1. That's fine, or, Very good.
2. That's good but really try to put yourself in the situation. Let's try it again. [The statement was replayed and the subject responded again.]
3. That's fine, but you're going to have to respond more quickly. Let's try it again.

4. Let's try it again and this time try to give more than a one-word answer. Go ahead and elaborate.
5. Oh, remember, if you actually wouldn't say anything then say what you would do and how you would feel. Let's try it again.
6. It's fine to respond that way [i.e. without a direct verbal response] some of the time. But if possible try to give verbal responses.

Almost all subjects appeared to feel comfortable with the procedure and followed instructions accurately by the end of trials with the first three practice statements.

After a subject finished responding to the practice tape, she was told that in a short while she would hear the longer tape coming through a speaker in the ceiling. Her attention was then directed to the tape recorder that was in the room to record the interaction that would ensue. The subject was told to face the microphone, but that she need not make any special effort to alter her natural way of speaking, since the microphone was sensitive. Before leaving the room, the experimenter reminded the subject that the person on the longer tape was obviously different from the person on the practice tape and that there was only one person on the longer tape.

Experimental session: phase three--
responding to the tape

It was during this next phase of the experimental session that subjects responded to one of the eight longer tapes. Immediately after conducting the last practice session, and turning on all of the tape recorders in the subjects' rooms, the experimenter went to the control room and

played the experimental or control tape selected for use during a given session. As noted earlier, this tape was connected to a system so that it could be simultaneously directed into each room in which a subject was waiting. The experimenter remained in the control room for the 20 minutes it took to complete this phase of the experiment.

Experimental session: phase four--
questionnaires and debriefing

Immediately after the subjects finished responding to the tape recording, they were directed back to the room in which phase one of this experiment was conducted. The experimenter did not answer any questions relating to the experiment, and he requested that subjects not speak to one another.

Subjects were seated around a table and were given a number of questionnaires to complete. Some of these questionnaires were used as dependent measures in this experiment, and their content is presented in the subsection below entitled "Additional Dependent Measures."

After all subjects were finished responding to the questionnaires, the experimenter explained the nature of the experiment in some detail and answered any questions. Most subjects found the experiment to be an interesting experience, and, after the debriefing, no subjects reported being left with negative or unpleasant feelings. At the end of the session, subjects were asked to avoid discussing the nature of this experiment with any other students, were thanked for participating, and were dismissed.

Procedures for Preparing the Data for Analysis

The primary raw data of this experiment were tape-recorded verbal responses. In order to analyze these data statistically, and test the major hypotheses of this experiment, it was necessary to transform the verbal responses into quantifiable form. In this section the procedures for preparing the data for analysis will be described. In addition, a number of scales completed by subjects will be discussed and other measures administered, but not utilized in this study, will be mentioned.

Although the entirety of each interaction session was recorded, only nine responses for each subject were utilized in testing the hypotheses. Since the major hypotheses of this experiment concerned changes in the variability and style of subjects' responses from the beginning to the end of the interaction, tapes were constructed so that the first three, middle three, and last three statements on each tape were carefully controlled across conditions (see p. 48-53).

Subjects' responses to the first three and last three items were considered representative of their responding during the initial and final phases of the interaction, respectively. Furthermore, subjects' responses to the middle three items were utilized in this study to represent the nature of their responding between the beginning and the end of the interaction. (The middle three items were of the same style but of higher intensity than the first three or last three items.)

Preparing tapes for rating

In order to transform those responses utilized as the data for this study into quantifiable form, nine tapes were prepared and submitted to three independent raters.¹ In order to do so, the first three, middle three, and last three responses of each subject were recorded off the tape recordings of interaction sessions onto a single master tape.² Nine separate tapes were then prepared from the master tape. Each of these tapes contained a maximum of 80 responses, which comprised the responses of all subjects to a given item. It was these tapes which the raters listened to and rated. In order to minimize rater bias further, responses were recorded off the master tape in a different random order in the preparation of each of the nine tapes.

Rating procedure

Once the nine tapes were prepared, they were submitted to the raters. Each rater rated each response on a tape on two dimensions (Dominance-Submission and Affection-Hostility), using the two 7-point

¹ These three raters were the same raters who were employed to rate the original stimulus tape (see page 43).

² Although the voices of both the subject and the stimulus interactant were audible on the tape recordings of the interaction sessions, only the subjects' responses were recorded onto the master tape. This precaution was necessary to minimize bias; e.g. if the statement to which a subject had been responding had been audible to the raters, it could conceivably have had an effect on their rating of the subject's response. For example, hearing that a statement made in a hostile fashion could have biased raters to rate responses to this statement "hostile" before even hearing the response.

rating scales mentioned above (see pp. 40-42).

The raters knew nothing about the hypotheses of this experiment. They were told that the responses on each tape represented the responses of a group of subjects to a statement. Raters were given only a brief description of the content of each statement, so that responses could be seen in some context.¹ However, raters did not know the styles of the statements to which subjects were responding; nor did they necessarily know that subjects were responding to statements which were expressed in different styles.

Tapes were submitted to raters one at a time. Raters were instructed to listen to the whole tape one time (in order to help get an idea of the range of responses on the tape) and then to go back and rate each response on the tape separately.

Deriving the major dependent measures from ratings

When the rating process was completed there was a maximum of 54 ratings² for each subject (9 responses x 3 raters x 2 variables), and

¹ E.g. before rating responses to item 1 (which reads, "I can't get class today. Do you think you can take some notes for me without messing up," in the H-D variant; and "Oh, look, I can't make it to class today. (pause) Would you do me a big favor and take some notes for me," in the A-S variant), raters were told that subjects were responding to someone "talking about taking class notes."

² Despite explicit instructions to respond to every statement on the stimulus tape, some subjects failed to make verbal responses to all of the nine items used in this study. The data of subjects who did not

these ratings served as the basis for deriving the major dependent measures used in the data analysis.

Before deriving the major dependent measures, estimates of inter-rater reliability were computed. The average inter-rater reliability coefficient for Dominance-Submission and Affection-Hostility ratings were .87 and .85, respectively,¹ indicating that the ratings of the three raters for a given response on a single dimension could be averaged to yield a single rating without significant distortion.

From the data submitted by the raters, 12 scores were derived which served as the major dependent measures in this study. The first six measures will be referred to as "mean scores." These scores represent the magnitude of a subject's responding on the Dominance-Submission (D-S) or Affection-Hostility (A-H) dimension during each of the three phases of the interaction (beginning, middle, and end). The remaining six variables will be referred to as "variability scores." These scores serve as estimates of the variability of a subject's responding on the D-S and A-H dimensions during each phase of the interaction. The specific procedures utilized for deriving the 12 dependent variables

respond to each of the first and last three items were eliminated from the study. However, of the subjects included 17 failed to respond to one of the middle three items and 4 failed to respond to two of the middle three items. Thus, there were 54 separate ratings for 59 subjects, but only 48 separate ratings for 17 subjects and only 42 separate ratings for 4 subjects.

¹The analysis for deriving these is described in more detail in the Results section, p. 73.

will be described in the paragraphs that follow.

D-S beginning mean score. This score represents a measure of the magnitude of a subject's responding on the D-S dimension at the beginning of the interaction. This score was derived by determining the mean of nine ratings: the D-S ratings of Raters 1, 2, and 3 for a given subject's responses to the first three items on the particular tape she heard.

A-H beginning mean score. This score represents a measure of the magnitude of a subject's responding on the A-H dimension at the beginning of the interaction. The A-H beginning score was derived by determining the mean of nine ratings: the A-H ratings of Raters 1, 2, and 3 for a given subject's responses to the first three items on the tape she heard.

D-S middle mean score. This score represents a measure of the magnitude of a subject's responding on the D-S dimension during the middle phase of the interaction. For those 59 subjects who responded to all three middle items, the D-S middle score was derived by determining the mean of nine ratings: the D-S ratings of Raters 1, 2, and 3 for a given subject's responses to the middle three items on the tape she heard.

Of the remaining 21 subjects, 4 responded to only one of the three middle items and 17 responded to two of the three middle items. Since a middle score could not be reasonably derived from only one response,

the data of those subjects who responded to only one of the middle items were eliminated from all analyses.

Those subjects who responded to two of the three middle items were retained in all analyses, but a special procedure had to be employed to derive their D-S middle scores. For those subjects, six rather than nine ratings were available (D-S ratings of Raters 1, 2, and 3 for responses to two of the three middle items). If the means of just these six ratings were used in deriving D-S middle scores, it is conceivable that D-S middle scores might be more extreme than in those cases in which nine ratings were available. Therefore, for a given subject who responded to only two of the three middle items, a substitution was made for the ratings of the item to which she failed to respond. The deleted item was determined and then, for that item, the mean D-S score for all subjects who were in the same experimental group, but who responded to the item deleted by the subject in question, was calculated. This score was then substituted for the three missing ratings, and the D-S middle score was calculated according to the usual procedure.¹

¹ The same procedure was utilized in deriving the variability scores (see p. 70) where middle items were involved. It seems highly improbable that substituting group mean scores for a deleted response would bias the results in analyses where just mean scores are involved since: (a) no more than 3 of the 17 subjects involved were in the same experimental group, and (b) for a total of 240 separate mean scores only 17 were involved.

Where variability scores are concerned, however, the lack of bias is less obvious. All 3 mean scores for middle items were involved in deriving each middle variability score. Therefore, for a total of 80 vari-

A-H middle mean score. This score represents a measure of the magnitude of a subject's responding on the A-H dimension during the middle phase of the interaction. A-H middle scores were derived in the same fashion as D-S middle scores, except that A-H ratings were used instead of D-S ratings.

D-S end mean score. This score represents a measure of the magnitude of a subject's responding on the D-S dimension during the final phase of the interaction. D-S end scores were derived in the same fashion as D-S beginning scores, except that ratings of subjects' responses to the last three items they heard were used instead of ratings of their responses to the first three items they heard.

A-H end mean score. This score represents a measure of the magnitude of a subject's responding on the A-H dimension during the final phase of the interaction. A-H end scores were calculated in the same fashion as D-S end scores except that A-H ratings were used instead of D-S ratings.

ability scores 17 were involved. The chief instance in which bias could occur is where a subject responds in an extreme fashion to the 2 middle items in which actual responses are available. In this case, the group mean score would be lower than the other mean scores and variability would be inflated. There are two facts, however, which would point to a lack of bias affecting the results: (a) Again, no more than 3 of the 17 subjects involved were in the same experimental group. (b) Inspection of Table 8 (p. 97) reveals that middle variability scores are lower than beginning and end variability scores, making it seem unlikely that variability was spuriously inflated.

The six variability measures. Six measures--the D-S beginning variability score, the A-H beginning variability score, the D-S middle variability score, the A-H middle variability score, the D-S end variability score, and the A-H end variability score--were derived to serve as estimates of the variability of a subject's responding during each phase of the interaction. All variability scores were derived using the following general formulas:

$$y_i = \sum_{k=1}^3 (T_{ik} - \bar{T}_i)^2$$

$$T_{ik} = \sum_{j=1}^3 T_{ijk}$$

$$\bar{T}_i = \frac{\sum_{k=1}^3 T_{ik}}{3}$$

where:

y_i = a score proportional to the variance (i.e. SS) of the i^{th} subject's responding over the k (three) items that represent a given phase of the interaction (i.e. beginning, middle, or end).

T_{ik} = the sum of the j (three) judges' ratings of the i^{th} subject's response on the k^{th} item.

\bar{T}_i = the mean of the T_{ik} 's.

Additional dependent measures

In addition to the major dependent measures, seven other measures were obtained to help determine the subjects' perception of the stimulus interactant, the subjects' liking of the stimulus interactant, and the subjects' felt involvement with the stimulus interactant. All of these measures were obtained directly from the subjects immediately after the interaction session (see p. 62). Each of the seven measures will be described in the paragraphs that follow, but it should be noted that only the first one (the Interpersonal Checklist with modified instructions) was utilized in the present study. It is anticipated that the other measures can be utilized as the basis for, or in the development of, future studies.

The Interpersonal Checklist (Leary, 1957), with modified instructions, was used as a measure of how a subject perceived the stimulus person with whom she interacted. Subjects were instructed to indicate which of the 132 ICL adjectives were "generally descriptive of the person you just interacted with." These ICL's were then scored according to the regular procedure to yield two scores: a Dominance (DOM) score and a Loving (LOV) score (Leary, 1957). With the ICL scoring system, a subject can receive either a positive or negative DOM or LOV score. A positive DOM score indicates that the stimulus person is perceived as dominant; a negative DOM score indicates that the stimulus person is perceived as submissive; a positive LOV score indicates that the stimulus person is perceived as affectionate; and a negative LOV score

indicates that the stimulus person is perceived as hostile.

In addition to the ICL indication of subjects' perception of the stimulus interaction was elicited by asking subjects to answer the four following free-response questions: (1) "Imagine that you were describing the person you just interacted with to your best friend, what would you say?" (2) "What do you think the person you just interacted with looks like?" (3) "If you used any names to address her what name (names) did you use?" (4) "Imagine that the person you just interacted with were describing you to her best friend, what do you think she would say?"

In order to assess how much a subject liked the stimulus person with whom she interacted, the subject was asked to indicate on a 5-point scale "how much you liked or disliked the person you just interacted with." Scale items ranged from 1, "In general I liked her very much," to 5, "In general I disliked her very much."

In order to assess the extent of involvement a subject felt with the stimulus person with whom she interacted, the subject was asked to indicate on a 7-point scale "how involved or unininvolved (removed) you felt toward the person you just interacted with." Scale items ranged from 1, "I felt very involved," to 7, "I felt very unininvolved."

CHAPTER III

RESULTS

Inter-Rater Reliability

The statistical procedure utilized for estimating inter-rater reliability was an analysis of variance technique described by Winer (1962). With this procedure a single reliability coefficient can be determined for any number of raters by using a repeated measurement design and the following formula:

$$r = 1 - \frac{MS \text{ w people}}{MS \text{ b people}} .$$

A total of 18 analyses of variance were executed. Nine analyses were necessary to determine the inter-rater reliability of D-S ratings, one for each of the 9 items utilized in obtaining the D-S beginning, middle, and end scores (see p. 66). Nine other analyses were necessary to determine the reliability of the corresponding A-H scores. Sixty-nine responses were rated by each rater on two dimensions for a total of 4,146 ratings. For each of the 6 beginning and end items a total of 80 responses were rated on two dimensions by each rater. However, the number of responses to the middle items varied between 71 and 75, because some

of the subjects included in the study failed to respond to all of the middle items (see p. 67).

Results of the analyses of the D-S and A-H ratings are reported in Table 1. The mean reliability coefficient for all items was .86, with a mean D-S coefficient of .87 and a mean A-H coefficient of .85. Individual item coefficients ranged from .77 to .93. All but two individual coefficients were above .80, and 11 were above .85.

With reliability coefficients at this level the ratings of subjects' responses to stimulus items were considered acceptable to test the hypotheses of this experiment. Furthermore, as stated above (p. 66), these results provided justification for averaging the ratings of the three raters (to provide a single rating for each subject on each item) in deriving beginning, middle, and end scores. The implications of having a reliable rating system like the present one will be discussed in the Discussion chapter.

Experimental Design

Before continuing with the presentation of results, it will be necessary to review the design of the experiment, to define some terms that will be used in the succeeding sections and to describe the basic analytic procedure. At this point it will be helpful for the reader to review the Model of Stimulus Tapes (Figure 4, p. 54) and, while doing so, to bear in mind that each cell of the model represents one of the eight experimental

Table 1

Reliability Coefficients for D-S and A-H Ratings of
Items Included in Later Analyses

Item	<u>r</u> for D-S Ratings ^a	<u>r</u> for A-H Ratings ^b
1	.87	.89
2	.84	.89
3	.93	.90
17	.90	.77
18	.91	.87
19	.85	.86
34	.89	.91
35	.82	.81
36	.85	.79

^aMean D-S reliability = .87.^bMean A-H reliability = .85.

groups. (Experimental groups are differentiated by the tape to which subjects in that group listened and responded.)

There were three factors inherent in the construction of the stimulus tapes: (a) order of beginning and end item cluster presentation; (b) style of beginning, middle, and end item clusters; and (c) percentage of items in each stylistic mode--or stylistic flexibility. For purposes of brevity, these factors will be labeled Order, Style, and Flexibility, respectively.

Each of the three factors was presented with two variations, and variations will be labeled as follows:

1. For the Order factor, Order 1, or Forward Order, will refer to those conditions in which Cluster A (items 1, 2, and 3) appeared at the beginning of the tape and Cluster B (items 34, 35, and 36) appeared at the end of the tape. Order 2, or Backward Order, will refer to those conditions in which Cluster B appeared at the beginning of the tape and Cluster A appeared at the end of the tape.

2. For the Style factor, HD will refer to those conditions in which the style of the beginning, middle, and end item clusters was Hostile-Dominant. AS will refer to those conditions in which the style of the beginning, middle, and end item clusters was Affectionate-Submissive.

3. For the Flexibility factor, Fixated will refer to those conditions in which 75% of the statements appearing on a tape were performed in one stylistic mode (HD or AS); and Flexible will refer to those conditions in

which 25% of the statements on the tape were in each of the four stylistic modes.

In this study a major concern is with differences and changes in subjects' responses on two interpersonal dimensions (D-S and A-H), either within or over different phases of the same interaction. Since two-dimensional responses and their variation are being explored, it was desirable to subject the data to a series of multivariate analysis procedures. Because three factors were varied in two major ways, and the same subject was studied in different phases of a single interaction, the initial design of the study was a three-way, $2 \times 2 \times 2$, multivariate analysis of variance. In each analysis an appropriate number of two-dimensional response vectors served as the dependent variables contrasted. The specific dependent variables considered in each analysis will be listed when that analysis is discussed.

Examination of the Experimental Manipulations

In order to ensure that interactants with different degrees of stylistic flexibility and differing stylistic orientations were in fact simulated, it was necessary to demonstrate that subjects listening and responding to the various tapes had different perceptions of the "person" with whom they interacted.

Two measures were used to assess whether the stimulus interactants were perceived in accordance with the intended preparation of the

tapes. These were the Dom and Lov scores for the ICL's indicating subjects' perception of the stimulus person (see p. 71). These scores are direct measures of the attributes on which the tapes were expected to differ--Dominance-Submission and Affection-Hostility.

The ICL perception data were analyzed within a $2 \times 2 \times 2$ multivariate analysis of variance with Dom and Lov scores as the dependent variables. Table 2 presents the means and standard deviations of the Dom and Lov measures. A summary of the associated multivariate analysis is found in Table 3.

Considering the composition of the stimulus tapes, it was expected that a significant style x flexibility interaction would be found: i.e. subjects' perceptions should differ as a result of the combined effect of the degree of flexibility of the stimulus interactant and the stylistic orientation of the interactant. More specifically, the following hypotheses regarding style and level of fixation should hold: (a) Fixated H-D interactants (tapes 1 and 3, represented as cells 1 and 3 on Figure 4, p. 54), should be perceived as more dominant and more hostile than fixated A-S interactants (tapes 2 and 4). (b) Fixated H-D interactants (tapes 1 and 3) should be seen as both more dominant and more hostile than their corresponding more flexible H-D controls (tapes 5 and 7). (c) Fixated A-S interactants (tapes 2 and 4) should be seen as more submissive and more affectionate than the more flexible A-S interactants (tapes 6 and 8).

Because the major differences between the tapes should be due to

Table 2
Means and Standard Deviations for ICL Perception Data

Group	Tape		Dom ^a	Lov ^b
<u>Fixated</u>				
H-D order 1 (n = 10)	1	M	6.04	-20.51
		SD	4.17	3.07
H-D order 2 (n = 8)	3	M	7.38	-20.28
		SD	3.75	6.79
A-S order 1 (n = 10)	2	M	-8.68	12.12
		SD	7.39	13.60
A-S order 2 (n = 10)	4	M	-8.25	5.69
		SD	9.18	8.98
<u>Flexible</u>				
H-D order 1 (n = 10)	5	M	-5.31	- 6.18
		SD	9.28	15.63
H-D order 2 (n = 10)	7	M	-5.62	- 4.94
		SD	10.19	9.73
A-S order 1 (n = 10)	6	M	4.01	- 8.50
		SD	3.48	8.57
A-S order 2 (n = 9)	8	M	-0.32	-10.80
		SD	8.77	10.33

^aThe higher the score, the more dominant.

^bThe higher the score, the more affectionate.

Table 3

Summary Multivariate Analysis of Variance
for ICL Perception Data

Variable	Source	df	MS	Univariate		Multivariate	
				F (1, 69)	p	F (2, 68)	p
Dom	A (order)	1	9.90	.18	.68	.81	n.s.
Lov			62.95	.59	.55		
Dom	B (flexibility)	1	16.61	.29	.60	1.01	n.s.
Lov			66.29	.62	.56		
Dom	C (style)	1	295.83	5.18	.02	14.44	.0001
Lov			303.99	28.49	.0001		
Dom	Ax B	1	49.10	.86	.64	.42	n.s.
Lov			31.54	.30	.60		
Dom	Ax C	1	29.04	.50	.51	.16	n.s.
Lov			124.56	1.17	.28		
Dom	Bx C	1	2417.92	42.36	.0001	29.19	.0001
Lov			3590.90	49.98	.0001		
Dom	Ax Bx C		16.62	.20	.66	.10	n.s.
Lov			11.68	.11	.74		
Dom	Error	69	57.08				
Lov			106.71				

the opposite and more extreme perceptions of the fixated H-D vs. A-S interactants, in addition to the style x flexibility interaction, a significant main effect for style would also be expected--H-D tapes should elicit more dominant and hostile perceptions than A-S tapes. The order of cluster presentation should have no effect on perception of the stimulus interactant, so that the main effect for order should not prove significant. Perception scores for fixated H-D interactants should be opposite in direction to corresponding scores for fixated A-S interactants, so that when combined they should cancel one another out. The perception scores for H-D and A-S flexible interactants should not be extreme, and should not differ greatly from one another. Therefore, when fixated and flexible perception scores are compared the main effect for flexibility should not prove significant.

Inspection of the results confirmed all of the predictions. There was a highly significant style x flexibility interaction ($F_{\text{mult}} = 29.19$; $p = .0001$), as well as a highly significant main effect for style ($F_{\text{mult}} = 14.44$; $p = .0001$). Within the style x flexibility interaction, highly significant univariate F ratios were evidenced for both the Dom ($F_{\text{univ}} = 42.36$; $p = .0001$) and Lov ($F_{\text{univ}} = 49.98$; $p = .0001$) dependent variables. These results warrant inspection of the specific hypotheses which will be presented below. Within the main effect for style, significant univariate F ratios were attained for both the Dom ($F_{\text{univ}} = 5.18$; $p = .02$) and Lov ($F_{\text{univ}} = 28.49$; $p = .0001$) dependent variables. Further inspection of

the results indicates that the differences between H-D and A-S tapes on both dimensions occurred in the expected directions--H-D tapes elicited more dominant and more hostile perceptions than A-S tapes. In addition, neither the main effect for order, the main effect for flexibility, nor any of the interaction effects other than style x fixation proved significant.

Since no analysis involving order proved significant, the tapes differing only in the order of cluster presentation were combined in testing the specific hypotheses presented above. These hypotheses were tested by contrasting each set of tapes under question within a multivariate context, with Dom and Lov scores as the dependent variables. Results of these analyses are presented in Table 4. These results indicate that all of the predictions were upheld at a highly significant level. Fixated H-D interactants were perceived as being both more dominant and more hostile than fixated A-S interactants ($F_{\text{mult}} = 38.42, p = .0001$; F_{univ} for Dom = 37.98, $p = .0001$; F_{univ} for Lov = 75.71, $p = .0001$). Fixated H-D interactants were also perceived as being more dominant and more hostile than flexible H-D interactants ($F_{\text{mult}} = 13.92, p = .0001$; F_{univ} for Dom = 24.43, $p = .0001$; F_{univ} for Lov = 19.40, $p = .0001$). In addition, fixated A-S interactants were seen as more affectionate and more submissive than flexible A-S interactants ($F_{\text{mult}} = 16.33, p = .0001$; F_{univ} for Dom = 18.11, $p = .0002$; F_{univ} for Lov = 31.39, $p = .0001$).

These results provide justification for stating with confidence that subjects perceived themselves as engaged with interactants whose inter-

Table 4

Summary of Multivariate Tests of Specific Hypotheses
Pertaining to ICL Perception Data

Variable	Source	df	MS	Univariate F (1, 69)	p	Multivariate F (2, 68)	p
Hypothesis a--Fixated H-D vs. Fixated A-S							
Dom			2166.63	37.96	.0001		
	Gps. 1 and 3 vs. 2 and 4	1				38.42	.0001
Lov			8078.52	75.71	.0001		
Dom				57.08			
	Error	69					
Lov				106.71			
Hypothesis b--Fixated H-D vs. Flexible H-D							
Dom			1394.54	24.43	.0001		
	Gps. 1 and 3 vs. 5 and 7	1				13.92	.0001
Lov			2070.62	19.04	.0001		
Dom				57.08			
	Error	69					
Lov				106.71			
Hypothesis c--Fixated A-S vs. Flexible A-S							
Dom			1034.01	18.11	.0002		
	Gps. 2 and 4 vs. 6 and 8	1				16.33	.0001
Lov			3349.83	31.39	.0001		
Dom				57.08			
	Error	69					
Lov				106.71			

personal qualities are consistent with the intended preparation of the stimulus tapes. We have thus demonstrated that interactants perceived as having different degrees of stylistic flexibility and differing stylistic orientations can be simulated by arranging pre-rated tape-recorded statements in pre-determined combinations. The implications of being able to produce such stimulus materials for future research will be discussed in the Discussion section of this study.

The Effect of Order

In order to ensure that any differences between responses to beginning and end item clusters within a tape were due to the hypothesized effects of the position of the cluster, rather than to the content or other characteristics of the particular items comprising the cluster, the order of the presentation of Clusters A and B were reversed in each of the four basic stimulus tapes. It was anticipated that the effect or order would not be significant and that the mean and variability scores of responses to tapes differing only in the order of cluster presentation could be combined in testing the main hypotheses of this experiment.

Two $2 \times 2 \times 2$ multivariate analyses of variance with four dependent variables each provided tests of the effect of order on mean and variability scores. In the first analysis the four dependent variables were: Beginning D-S mean score, End D-S mean score, Beginning A-H mean score, and End A-H mean score. In the second analysis the corresponding variability

scores were the dependent variables. In each analysis appropriate scores on Clusters A and B were contrasted at both the beginning and the end of the interaction.

The effect of order on mean scores

The means and standard deviations of D-S and A-H mean scores are presented in Table 5. The multivariate analysis of variance in which beginning and end mean scores were contrasted is presented in Table 6. This analysis indicates that, contrary to expectation, the item clusters themselves did have an effect upon the type of responses elicited. The multivariate F ratio for the main effect of order was significant ($F_{\text{mult}} = 4.19; p = .005$). None of the interaction effects involving order proved significant. Inspection of the univariate F ratios for the main effect of order indicates that, at the beginning of the interaction, contrasts of the mean scores for Clusters A and B on both the D-S and A-H dimensions were not significant. However, at the end of the interaction significant differences on both the D-S ($F_{\text{univ}} = 6.09; p = .02$) and the A-H ($F_{\text{univ}} = 9.63; p = .003$) dimensions were found. As illustrated in Figure 5, at the end of the interaction Cluster A items elicited both more dominance and more hostility than Cluster B items.¹ Because the items comprising Clusters A and B were controlled for intensity (additionally, all items

¹ In addition to a significant main effect for order, there was also a significant main effect for style in these analyses. This result relates to the style hypothesis and will be considered in the next section of this chapter.

Table 5

Means and Standard Deviations of D-S and A-H
Beginning, Middle, and End Mean Scores

Group	Tape	D-S			A-H			
		Beg.	Mid.	End	Beg.	Mid.	End	
<u>Fixated</u>								
H-D order 1 (n = 10)	1	M	3.88	3.65	3.77	4.19	4.44	3.80
		SD	.82	.11	.73	.49	.64	.43
H-D order 2 (n = 8)	3	M	3.56	3.79	4.57	3.72	4.43	4.11
		SD	.73	.62	.69	.72	.39	.74
A-S order 1 (n = 10)	2	M	3.64	3.73	3.28	3.79	3.16	3.42
		SD	.62	.53	.46	.69	.31	.35
A-S order 2 (n = 10)	4	M	3.40	3.83	3.63	3.51	3.18	3.62
		SD	.52	.39	.97	.58	.35	.62
<u>Flexible</u>								
H-D order 1 (n = 10)	5	M	3.81	3.31	3.94	4.14	4.27	3.73
		SD	.73	.62	.79	.71	.49	.82
H-D order 2 (n = 10)	7	M	4.01	3.27	4.36	3.94	4.16	4.10
		SD	.87	.47	.81	.69	.76	.67
A-S order 1 (n = 10)	6	M	3.66	3.95	4.23	3.50	3.52	3.20
		SD	1.08	.42	.64	.52	.36	.50
A-S order 2 (n = 9)	8	M	3.82	3.44	4.36	3.82	3.61	3.85
		SD	.65	.52	.65	.41	.43	.58

Table 6

Summary Multivariate Analysis of Variance for Beginning
and End Mean Score Contrasts

Variable	Source	df	MS	Univariate F (1, 69)	p	Multivariate F (4, 66)	p
D-S Beg.			.01	.02	.88		
D-S End			3.38	6.04	.02		
	A (order)	1				4.19	.005
A-H Beg.			.47	1.30	.26		
A-H End			3.76	9.63	.003		
D-S Beg.			.34	.55	.53		
D-S End			2.85	5.10	.03		
	B (flexibility)	1				1.37	n. s.
A-H Beg.			.08	.23	.64		
A-H End			.14	.36	.56		
D-S Beg.			1.33	2.17	.14		
D-S End			2.01	3.58	.06		
	C (style)	1				4.75	.002
A-H Beg.			2.19	6.09	.02		
A-H End			4.47	11.71	.001		
D-S Beg.			.50	.81	.63		
D-S End			.71	1.27	.26		
	AxB	1				1.27	n. s.
A-H Beg.			1.06	2.96	.09		
A-H End			.07	.19	.67		
D-S Beg.			.08	.13	.72		
D-S End			.94	1.68	.20		
	AxC	1				1.04	n. s.
A-H Beg.			.73	2.05	.15		
A-H End			.01	.03	.87		

Table 6 (continued)

Variable	Source	df	MS	Univariate		Multivariate	
				F (1, 69)	p	F (4, 66)	p
D-S Beg.			.03	.04	.84		
D-S End			3.47	6.20	.01		
	BxC	1				1.60	n.s.
A-H Beg.			.03	.07	.78		
A-H End			.10	.27	.61		
D-S Beg.			.0002	.0003	.98		
D-S End			.02	.03	.86		
	AxBxC	1				.38	n.s.
A-H Beg.			.15	.41	.53		
A-H End			.45	1.15	.29		
D-S Beg.			.62				
D-S End			.56				
	Error	69					
A-H Beg.			.36				
A-H End			.39				

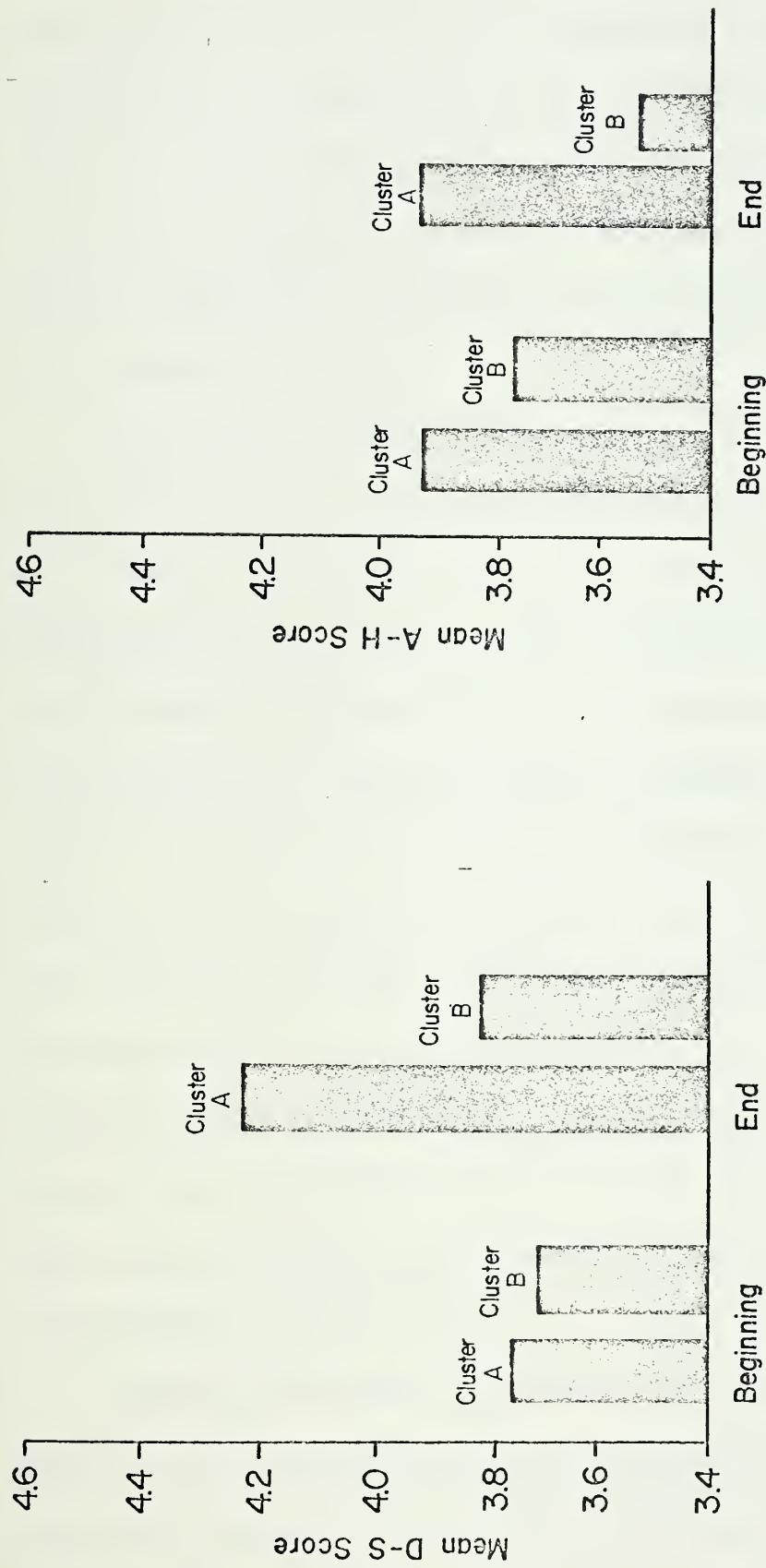


Figure 5. The Main Effect of Order on Beginning and End D-S and A-H Mean Scores

were of low intensity, see p. 52), a significant main effect for order was not anticipated. Furthermore, the fact that significant results occurred at the end, but not at the beginning, of the interaction makes the results even more confusing. In order to try to account for the results that were obtained, differences in the content of items comprising each cluster will be examined.

It should be remembered that there were six specific items comprising each cluster--three H-D variants and three A-H variants of three basic items for each cluster. Although the stylistic variants of each item expressed the same content, the items comprising Cluster A and Cluster B could only be controlled for intensity. Since the style x order effect was not significant, differences between responses to Clusters A and B occurred across stylistic variants; i.e. subjects responded with more hostility and more dominance to Cluster A items than to Cluster B items at the end of the interaction, regardless of whether these items were presented in the A-S mode or the H-D mode. Therefore, it seems logical to ask: Are there any differences between the content of the items comprising Cluster A and Cluster B that might cause Cluster A items to elicit more dominance and more hostility (regardless of the stylistic presentation) than Cluster B items?

The six specific items comprising each cluster are presented in Figure 6. If we examine the content of these items, disregarding for the moment the fact that much of the impact of a given item is the result of

Cluster A: H-D Variants

Item

1. I can't get to class today. Do you think you can take some notes for me without messing up?
2. I heard you saying you're having chocolate pie for dessert. I just want you to know I happen to be allergic to chocolate.
3. Look, I know you're into working, but I simply cannot work on this project one minute longer. Now if we go out and have a few beers I'll be able to get into it later.

Cluster B: H-D Variants

Item

34. I'm really hungry. Don't you have anything to eat around here?
35. I just got that record you said you like. If you come over to my house you can listen to it.
36. They just said there's a 90% chance of rain tomorrow. Too bad it looks like you won't be able to go on that picnic.

Cluster A: A-S Variants

Item

1. Oh, look, I can't make it to class today. (pause) Would you do me a big favor and take some notes for me?
2. Gee, I'm allergic to chocolate. I just wanted to tell you so you'll know it's not that I don't like your dessert.
3. Oh, I know you're into working. But if you wouldn't mind taking a break, and maybe having a beer, I really think I could do a better job.

Cluster B: A-S Variants

Item

34. Oh, I'm so hungry. Do you think you might have something around that I can eat?
35. I just got a new record. I think you'll like it. If you want, come on over and listen to it.
36. Gee, they just said there's a 90% chance of rain tomorrow. It would really be too bad if you can't go on that picnic. Don't you think?

Figure 6. Item Composition of Cluster A and Cluster B.

such nonverbal stylistic factors as voice tone and emphasis, differences between the items comprising Clusters A and B do emerge. In the paragraphs that follow we will attempt to demonstrate that, on the level of content alone, the stimulus items comprising Cluster A are more inviting of dominant responding than the stimulus items in Cluster B; and that the items in Cluster B are less conducive to hostile responding than the items in Cluster A.

Let us first consider the items comprising each cluster on the basis of the dominance-submission responding they might conceivably evoke. On the level of content alone, two of the three items comprising Cluster A (items 1 and 3) are direct requests which offer the other nothing concrete to gain for compliance. Such requests leave room for both hostile-dominant rejection or criticism, or affectionate-dominant non-compliance, or provision of an alternative plan. In Cluster B, item 34 parallels items 1 and 3 of Cluster A--a direct request where the other stands nothing to gain. However, the other two items are of a different nature. Item 35 is a request--but one in which the other does stand to gain by complying. Hence, this request could be seen as more difficult to reject, refuse, or counteract than the others. Item 36 is primarily a statement of factual information which again might make dominant responding in the form of rejection, contradiction, nurturance, or the proposing of alternatives more difficult to effect. Thus, on the basis of content alone, the items comprising Cluster A appear more promoting of dominant

responding than the items comprising Cluster B.

With regard to affection-hostility, items 35 and 36, especially when performed in the H-D mode, appear to be more ambiguous in their emotional intent than any of the items comprising Cluster A. The Cluster A H-D items are clearly negative in their emotional attitude toward the other. However, item 35, even when uttered in an H-D fashion, is still an offer to satisfy a need of the other, and hence implies at least some degree of acceptance of the other. Such ambiguity might make a hostile response at least somewhat more difficult to follow. Although item 36 basically furnishes factual information, it also provides some degree of sympathy for the other, again making hostile responding more difficult. Thus, it appears that, on the basis of content alone, Cluster B is less conducive to hostile responding than Cluster A.

Although this post-hoc explanation does make one aspect of the pattern of significant results obtained understandable, we still have not accounted for why differences between Clusters A and B should occur at the end of the interaction, but not at the beginning. If, however, we consider the characteristics of the task at hand at the beginning vs. the end of the interaction, we can make some inferences about why the differences in content have an effect only at the end. At the beginning of the interaction, the subject is faced with a "stranger" with whom she must interact and a task that, despite the practice session, may still appear new and unusual. The stress and uneasiness that are potentially evoked by

both of these factors could make responding more emotional and automatic, and thus more influenced by the stylistic, nonverbal qualities of the statement at hand. The subject has less ability to process what is being said and responds more on the basis of how it is said. As the interaction progresses and the subject becomes more "familiar" with the interactant and more at ease with the task at hand, she may be more able to reflect upon the more subtle nuances of the content, described above. Consequently, responding at the end of the interaction could fall more under the influence of content than it does at the beginning of the interaction and, thus, account for why differences between responses to Clusters A and B occur only at the end of the interaction.

Having surmised why differences in content might have more impact at the end of the interaction, let us proceed to see if the explanation offered above, as to how content should affect responding, is consistent with the results obtained. Examination of Figure 5 (p. 89) indicates that, at the end of the interaction on the D-S dimension, the differences in response to Clusters A and B are primarily the result of subjects responding more dominantly to Cluster A at the end than they did at the beginning. These results are consistent with the notion that Cluster A is more promoting of dominant responding than Cluster B. With regard to specific items (see Table 7), there is little difference between the subjects' response to items 1 and 34, but subjects respond with more dominance to items 2 and 3 than to items 35 and 36.

Table 7

Mean D-S and A-H Responses to Cluster A and B Items
at the End of the Interaction

Mean D-S Responses to Cluster A Items

Group	Tape	Item 34	Item 35	Item 36
Fixated H-D	1	4.00	3.33	3.96
Flexible H-D	5	3.90	3.63	4.30
Fixated A-S	2	3.13	2.93	3.44
Flexible A-S	6	<u>3.87</u>	<u>3.73</u>	<u>5.10</u>
		$\bar{X} = 3.73$	$\bar{X} = 3.41$	$\bar{X} = 4.28$

Mean D-S Responses to Cluster B Items

Group	Tape	Item 1	Item 2	Item 3
Fixated H-D	3	3.88	4.46	5.38
Flexible H-D	7	3.83	3.80	5.43
Fixated A-S	4	3.10	4.00	3.80
Flexible A-S	8	<u>4.19</u>	<u>4.07</u>	<u>4.81</u>
		$\bar{X} = 3.75$	$\bar{X} = 4.08$	$\bar{X} = 4.86$

Mean A-H Responses to Cluster A Items

Group	Tape	Item 34	Item 35	Item 36
Fixated H-D	1	4.30	3.10	4.00
Flexible H-D	5	4.23	2.93	4.03
Fixated A-S	2	3.33	2.60	4.33
Flexible A-S	6	<u>3.30</u>	<u>3.00</u>	<u>3.30</u>
		$\bar{X} = 3.79$	$\bar{X} = 2.91$	$\bar{X} = 3.92$

Mean A-H Responses to Cluster B Items

Group	Tape	Item 1	Item 2	Item 3
Fixated H-D	3	3.88	4.21	4.25
Flexible H-D	7	4.13	3.47	4.70
Fixated A-S	4	3.63	3.40	3.83
Flexible A-S	8	<u>4.22</u>	<u>3.19</u>	<u>4.15</u>
		$\bar{X} = 3.97$	$\bar{X} = 3.57$	$\bar{X} = 4.24$

On the A-H dimension, differences in subjects' response to Clusters A and B is primarily the result of their responding with more affection to Cluster B items than to Cluster A items (see Figure 5, p. 89). These findings are consistent with the notion that, on the basis of content, Cluster B is more evocative of affectionate responding than Cluster A. With regard to specific items (see Table 7, p. 95), there is again little difference between subjects' response to items 1 and 34. Most of the difference in response to Clusters A and B is the result of subjects' responding with more affection to items 35 and 36 than to items 2 and 3. Thus, the post-dictive explanations offered for the way in which content alone should affect responding are supported by the data.

The effect of order on variability scores

The means and standard deviations of D-S and A-H variability scores are presented in Table 8. (The method for deriving these scores was discussed on pp. 65-70 above.) The multivariate analyses of variance in which beginning and end variability scores were contrasted, presented in Table 9, indicate that the item clusters themselves had a significant effect upon the variability of response elicited. The multivariate F ratio for the main effect of order was significant ($F_{mult} = 3.80$; $p = .008$). Inspection of the univariate F ratios indicates that at the beginning of the interaction the contrast of variability scores for Clusters A and B on the D-S dimension proved significant ($F_{univ} = 9.82$; $p = .003$). Differences in variability on the A-H dimension at the beginning of the interaction

Table 8

Means and Standard Deviations of D-S and A-H Beginning,
Middle, and End Variability Scores

Group	Tape	D-S			A-H			
		Beg.	Mid.	End	Beg.	Mid.	End	
<u>Fixated</u>								
H-D order 1 (n = 10)	1	M	49.33	23.09	18.53	33.47	18.88	25.73
		SD	26.06	22.04	13.69	21.30	17.88	18.53
H-D order 2 (n = 8)	3	M	17.25	23.19	43.67	14.33	11.21	22.92
		SD	10.21	17.06	36.25	14.17	11.22	18.42
A-S order 1 (n = 10)	2	M	28.27	18.26	24.67	18.80	9.11	21.53
		SD	17.57	12.47	19.42	13.80	8.00	17.57
A-S order 2 (n = 10)	4	M	30.07	23.40	26.07	14.07	4.66	19.07
		SD	27.54	15.19	18.09	11.14	5.48	18.73
<u>Flexible</u>								
H-D order 1 (n = 10)	5	M	51.80	20.65	36.73	16.73	12.98	19.07
		SD	27.91	15.19	25.93	16.95	15.70	18.02
H-D order 2 (n = 10)	7	M	27.20	13.04	43.40	15.40	9.23	28.47
		SD	24.15	12.58	30.07	11.75	5.22	30.50
A-S order 1 (n = 10)	6	M	20.73	16.59	29.80	14.73	8.87	11.20
		SD	18.38	12.31	29.54	10.35	5.23	19.43
A-S order 2 (n = 9)	8	M	14.22	16.09	18.82	15.85	9.77	18.82
		SD	13.93	14.56	13.02	12.76	10.49	13.02

Table 9

Summary Multivariate Analysis of Variance for Beginning and End Variability Score Contrasts

Variable	Source	df	MS	Univariate		Multivariate	
				F (1, 69)	p	F (4, 66)	p
D-S Beg.			4692.00	9.82	.003		
D-S End			547.76	.93	.66		
A-H Beg.	A (order)	1	668.94	3.24	.07	3.80	.008
A-H End			85.42	.21	.65		
D-S Beg.			211.25	.44	.52		
D-S End			513.43	.87	.64		
A-H Beg.	B (flexibility)	1	333.47	1.61	.21	.80	n. s.
A-H End			149.42	.37	.55		
D-S Beg.			369.01	7.72	.01		
D-S End			1856.03	3.14	.08		
A-H Beg.	C (style)	1	276.27	1.34	.25	3.34	.01
A-H End			768.81	1.93	.17		
D-S Beg.			10.27	.03	.88		
D-S End			871.20	1.47	.23		
A-H Beg.	AxB		798.01	3.87	.05	1.78	n. s.
A-H End			665.10	1.67	.20		
D-S Beg.			3116.67	6.52	.01		
D-S End			1705.09	2.88	.09		
A-H Beg.	AxC	1	426.27	2.07	.15	2.81	.03
A-H End			555.53	.001	.97		

Table 9 (continued)

Variable	Source	df	MS	Univariate		Multivariate	
				F (1, 69)	p	F (4, 66)	p
D-S Beg.			1590.14	3.33	.07		
D-S End			568.89	.96	.67		
	BxC	1				1.19	n.s.
A-H Beg.			256.80	1.24	.27		
A-H End			209.09	.52	.52		
D-S Beg.			306.80	.64	.57		
D-S End			28.80	.05	.82		
	AxBxC	1				.38	n.s.
A-H Beg.			151.25	.73	.60		
A-H End			39.20	.10	.75		
D-S Beg.			477.98				
D-S End			591.62				
	Error	69					
A-H Beg.			206.34				
A-H End			399.08				

were not significant. Differences at the end of the interaction on both the D-S and A-H dimensions were not significant either. Examination of Figure 7 indicates that at the beginning of the interaction Cluster A elicited more variability on the D-S dimension than Cluster B.

In addition to a significant main effect for order, there was also a significant order x style interaction effect ($F_{\text{mult}} = 2.81$; $p = .03$). The only significant univariate F ratio was for the beginning D-S comparisons ($F_{\text{univ}} = 6.53$; $p = .01$). Inspection of Figure 7 indicates that at the beginning of the interaction the significant order effect occurred primarily because Cluster A H-D items elicited more variability on the D-S dimension than Cluster B H-D items.

In addition, it should be noted that in the analyses under discussion there was a significant main effect for style ($F_{\text{mult}} = 3.34$; $p = .01$). Inspection of the univariate F ratios indicates that at the beginning of the interaction the contrast of variability scores for H-D and A-S items occurred only on the D-S dimension and primarily at the beginning of the interaction ($F_{\text{univ}} \text{ D-S Beg} = 7.72$; $p = .007$). Consideration of the significant order x style interaction and inspection of Figure 7 indicate that the significant style effect occurred primarily because Cluster A H-D items elicited more variability on the D-S dimension than Cluster A A-S items.

As with the results for mean scores, the fact that the two clusters had a differential effect upon the variability of response elicited was unanticipated. However, the variability score results are even more

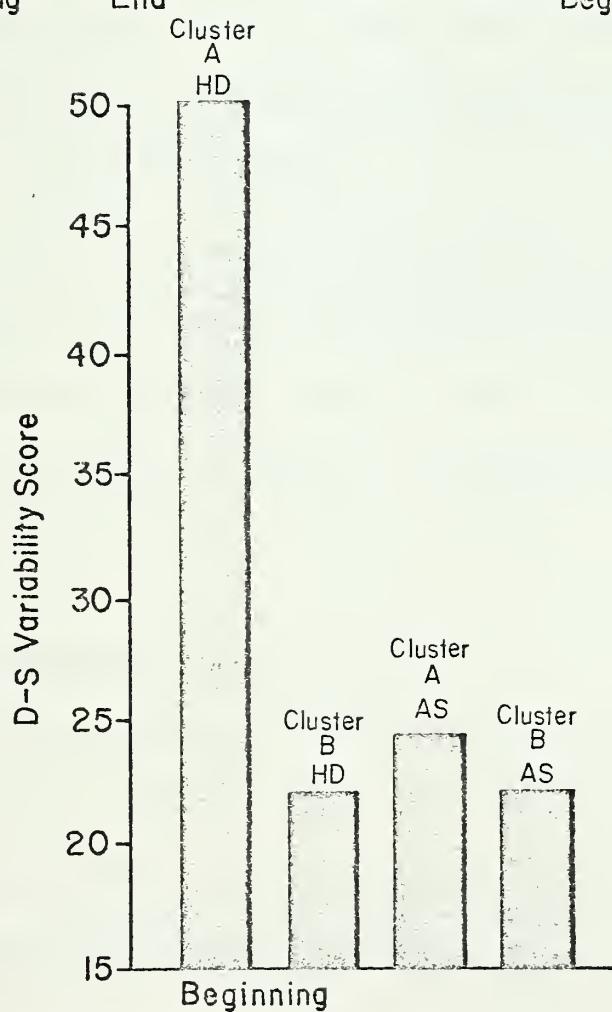
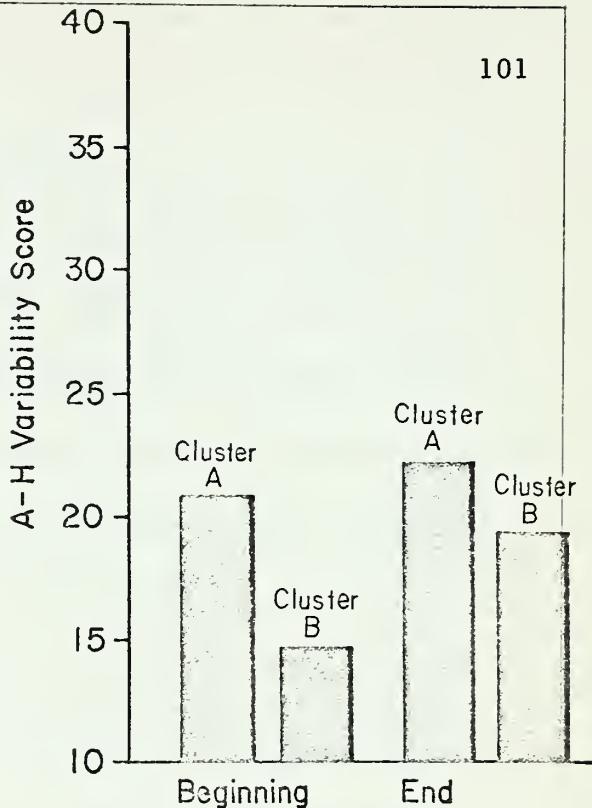
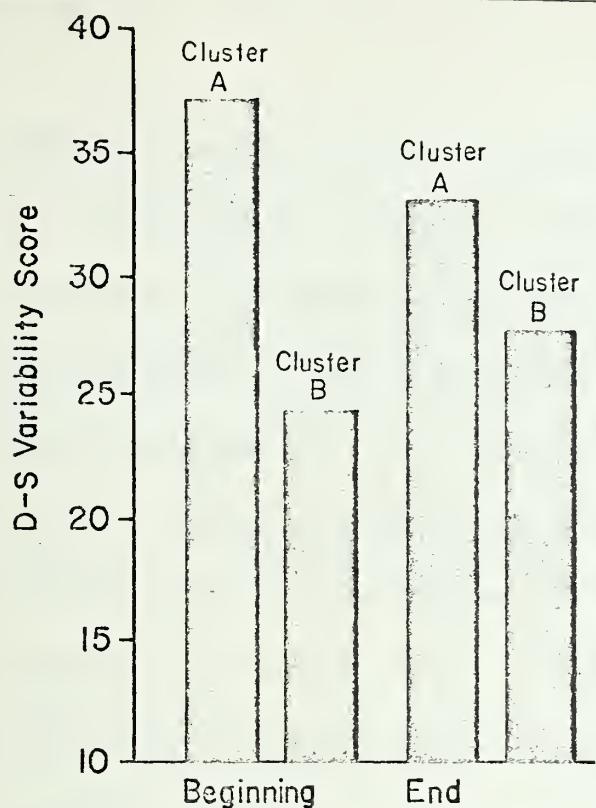


Figure 7. The Main Effect of Order on D-S and A-H Beginning and End Variability Scores (with significant O×S interaction)

difficult to explain than the mean score results.

The fact that H-D items elicited more variability of response than A-S items at the beginning of the interaction (significant style effect) is understandable. It seems likely that being faced with a stranger whose initial responses are hostile and dominant would prove to be more unusual and more disorienting than being faced with a stranger whose responses are affectionate and submissive. We can assume that casual conversation, especially upon initial contact, is generally undertaken in a cordial and polite fashion. It could be that one way of adapting to a stranger who responds in an unusual manner (in this case, H-D) is to vary one's own response, perhaps with the hope of making an impact and effecting a change in the other's style of responding.

However, the results were more complex than simply more variability on H-D than on A-S items at the beginning of the interaction. All of the differential variability effects appear to have occurred primarily because Cluster A H-D items elicited more variability at the beginning of the interaction than any of the other clusters.

Implications of the significant order effects

The primary purpose of both the mean score and variability score order analyses was for technical reasons. More clear than the explanations of both sets of results are the implications of these results for further data analyses in the present experiment, and for the execution of

future research employing the same stimulus materials used in the present experiment.

Because order proved to be a significant factor, we are not justified in combining scores of item clusters in the same position on tapes that differ only in the order of cluster presentation. This is a disappointing consequence, since the experiment was designed with the hope of combining groups, and thereby decreasing the number of cells from eight to four and increasing the sample size from 10 per group to 20 per group. Instead, it will be necessary to analyze the results of the responses to forward and backward tapes separately, considering them as representing two separate experiments, or as two replications of the same experiment.¹ In the remaining analyses the design will therefore be altered to a 2×2 , and each individual analysis will be done twice--once considering the forward tapes alone and a second time considering the backward tapes alone.

The present results make it clear that controlling beginning and end item clusters for intensity is not a sufficient measure to obviate against order effects. More careful consideration needs to be given to the content of the items comprising the item clusters, attempting to construct them so that they are as parallel in content as possible. In addition, it would certainly be worthwhile to run pretests until item clusters are

¹ For purposes of brevity, we will refer to that group of tapes in which Cluster A appears at the beginning and Cluster B appears at the end (tapes 1, 2, 5, and 6, Figure 4, p. 54) as the forward experiment and those tapes in which Cluster B appears at the beginning and Cluster A appears at the end (tapes 2, 4, 7, and 8) as the backward experiment.

found which are equivalent in terms of the type and intensity of the responses elicited.

Examination of Results Pertaining to
the Style Hypothesis

Predictions

The style hypothesis, quoted below, provides predictions for the present experiment concerning the types of interpersonal responses which are expected to be elicited by given interpersonal stimuli.

Hypothesis 1. When comparing the responses of groups of subjects to individuals making H-D vs. A-S statements:

- (a) Subjects will respond differently to H-D statements than to A-S statements on the D-S dimension.
- (b) Subjects will respond more submissively to H-D statements than to A-S statements.
- (c) Subjects will respond differently to H-D statements than to A-S statements on the A-H dimension.
- (d) Subjects will respond with more hostility to H-D statements than to A-S statements.

Two 2×2 multivariate analyses of variance, each with six dependent variables, provided a test of the style hypothesis. The data of the forward and backward experiments were analyzed separately. The results of the two analyses appear in Tables 10 and 11, respectively. The six dependent variables considered in each analysis were the D-S and A-H beginning, middle, and end mean scores.

In terms of the analyses, it was predicted that the multivariate F ratios for the main effect of style would prove significant for both the forward and backward experiments. Since the style hypothesis is based

Table 10

Summary Multivariate Analysis of Variance for Beginning,
 Middle, and End Mean Score Contrasts--
 Forward Experiment Only

Variable	Source	df	MS	Univariate F (1, 69)	p	Multivariate F (6, 64)	p
D-S Beg.			.01	.01	.91		
D-S Mid.			.36	.09	.76		
D-S End			3.21	5.98	.02		
	A (flexibility)	1				1.45	n. s.
A-H Beg.			.28	.74	.61		
A-H Mid.			.09	.39	.54		
A-H End			.21	.57	.54		
D-S Beg.			.38	.64	.57		
D-S Mid.			1.30	3.31	.07		
D-S End			.10	.19	.67		
	B (style)	1				43.32	.0001
A-H Beg.			2.73	7.35	.008		
A-H Mid.			10.24	42.32	.0001		
A-H End			2.08	5.71	.02		
D-S Beg.			.01	.03	.87		
D-S Mid.			.82	2.10	.15		
D-S End			1.51	2.82	.09		
	AxB	1				1.06	n. s.
A-H Beg.			.15	.40	.54		
A-H Mid.			.69	2.83	.09		
A-H End			.06	.17	.69		
D-S Beg.			.59				
D-S Mid.			.39				
D-S End			.54				
	Error	69					
A-H Beg.			.37				
A-H Mid.			.22				
A-H End			.36				

Table 11

Summary Multivariate Analysis of Variance for Beginning,
 Middle, and End Mean Score Contrasts--
 Backward Experiment Only

Variable	Source	df	MS	Univariate		Multivariate	
				F (1, 69)	p	F (6, 64)	p
D-S Beg.			1.73	2.92	.09		
D-S Mid.			1.90	4.84	.03		
D-S End			.60	1.12	.29		
	A (flexibility)	1				1.95	n. s.
A-H Beg.			.63	1.71	.19		
A-H Mid.			.05	.22	.64		
A-H End			.11	.30	.59		
D-S Beg.			.28	.48	.50		
D-S Mid.			.10	.25	.62		
D-S End			2.00	3.73	.05		
	B (style)	1				6.24	.0001
A-H Beg.			.27	.71	.59		
A-H Mid.			7.50	31.01	.0001		
A-H End			1.25	3.43	.07		
D-S Beg.			.004	.006	.93		
D-S Mid.			.05	.12	.73		
D-S End			2.02	3.76	.05		
	AxB	1				1.28	n. s.
A-H Beg.			.02	.04	.83		
A-H Mid.			1.14	4.69	.03		
A-H End			.13	.37	.55		
D-S Beg.			.59				
D-S Mid.			.39				
D-S End			.54				
Error		69					
A-H Beg.			.37				
A-H Mid.			.22				
A-H End			.36				

upon the hypothesized "reflexive" relationship of interpersonal stimuli and responses, there is no reason to assume that even at the beginning of the interaction significant style differences would not occur. Therefore, it was predicted that all six univariate F ratios for the main effect of style, in both experiments, would prove significant.

On the basis of the style hypothesis alone, no predictions of significant results were made concerning the effects of listening to fixated vs. flexible tapes, or the interaction between the style of the stimulus and the level of fixation of the stimulus interactant. However, when discussing the restriction hypotheses in a later section, predictions concerning the main effect of flexibility and the style x flexibility interaction effect will be considered.

Results

The actual findings confirmed the prediction of a significant multivariate F ratio for the main effect of style in both the forward experiment ($F_{mult} = 43.32$; $p = .0001$) and the backward experiment ($F_{mult} = 6.24$; $p = .0001$). However, not all of the predicted univariate F ratios were significant. The A-H dependent variables were the main contributors to the highly significant style effect. Furthermore, results involving the A-H variables occurred in the predicted direction in all instances and Hypotheses 1c and 1d were, thus, strongly confirmed by the data. The results involving the D-S dependent variables were less clear and were,

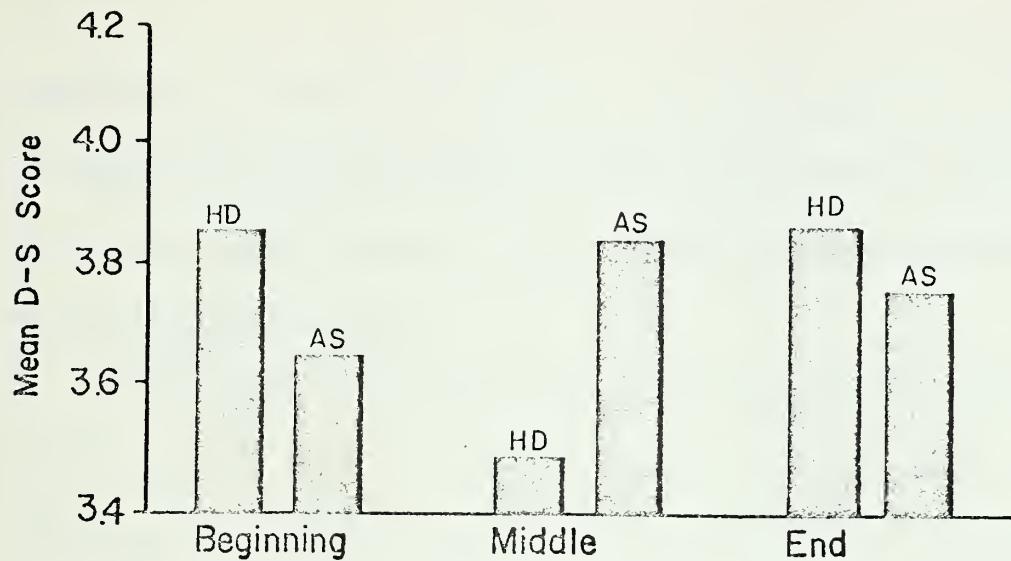
for the most part, not supportive of either Hypothesis 1a or 1b. The specific results for the D-S and A-H beginning, middle, and end comparisons will be presented in the paragraphs that follow.

There were no significant univariate F ratios for the comparison of mean D-S responses to H-D and A-S item clusters occurring at the beginning of the interaction, in either the forward or backward replications. Furthermore, there were no significant findings for comparisons of D-S responses during the middle of the interaction. In the forward experiment, however, the D-S middle comparison did show a trend toward significance ($F_{univ} = 3.31; p = .07$). Examination of Figure 8 indicates that in this instance H-D tapes elicited more submissive responding than A-S tapes. This result was in the direction predicted by Hypothesis 1b. In the backward experiment, the same pattern of results was replicated in the middle phase of the interaction--H-D tapes elicited more submissive responding than A-S tapes. However, the magnitude of difference between the two tapes was smaller than in the forward experiment and not significant.

The only significant univariate F ratio for D-S scores occurred at the end of the interaction in the backward experiment. In this instance, the main effect for style occurred because H-D tapes elicited more dominant responding than A-S tapes (Figure 8). While this finding supports Hypothesis 1a, it is opposite in direction to the prediction of Hypothesis 1b. At the end of the forward experiment and at the beginning of both

Forward Experiment

109



Backward Experiment

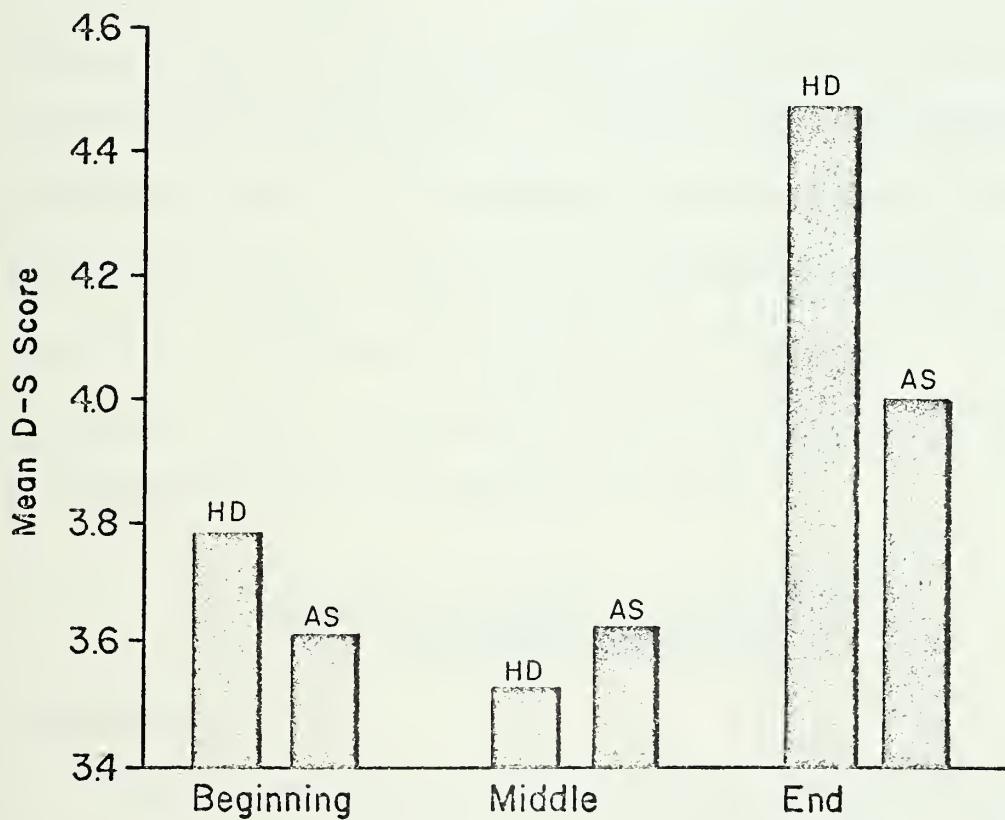


Figure 8. The Main Effect of Style on Beginning, Middle, and End D-S Mean Scores in the Forward and Backward Experiments

experiments, although the contrasts proved nonsignificant, the direction of differences between H-D and A-S tapes was consistent with the significant pattern described above: i.e. H-D tapes elicited more dominant responding than A-S tapes.

Of the six comparisons involving A-H dependent variables, four were significant and a trend toward significance occurred in a fifth. Significant univariate F ratios for the comparison of mean A-H responses to H-D and A-S item clusters occurred at the beginning of the interaction in the forward experiment ($F_{univ} = 7.35$; $p = .008$), in the middle of the interaction for both the forward ($F_{univ} = 42.31$; $p = .0001$) and backward ($F_{univ} = 31.01$; $p = .0001$) experiments, and at the end of the interaction in the forward experiment ($F_{univ} = 5.71$; $p = .02$). Additionally, the A-H comparison at the end of the backward experiment showed a trend toward significance ($F_{univ} = 3.43$; $p = .07$). Examination of Figure 9 indicates that in each of the comparisons H-D tapes elicited more hostility than A-S tapes. Thus, the findings with regard to the A-H dependent variables are highly supportive of Hypotheses 1c and 1d.

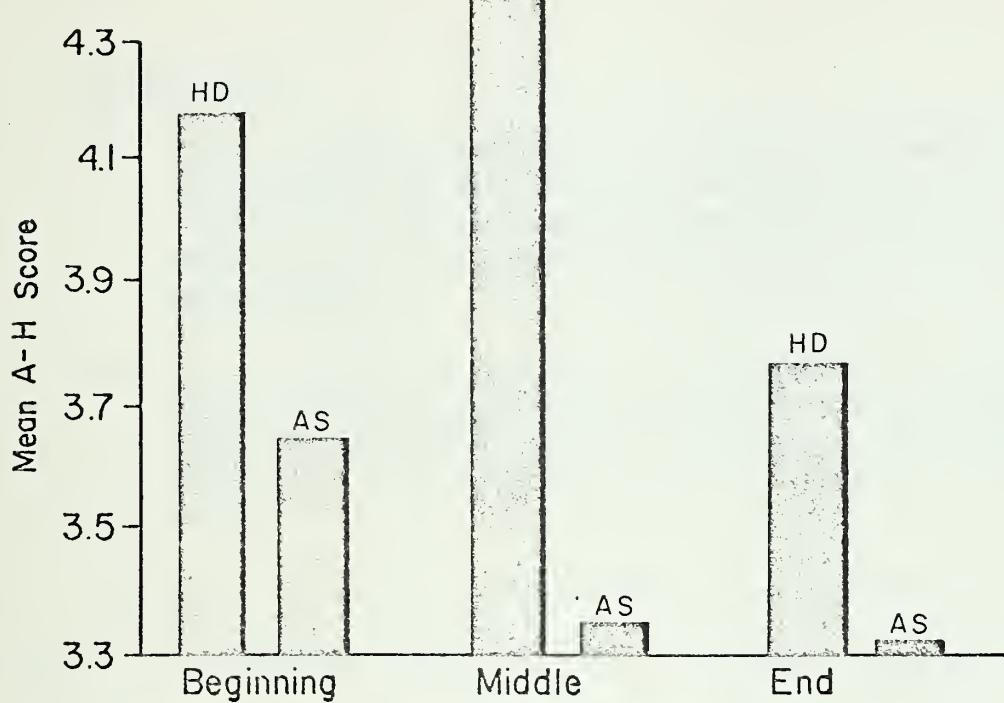
Examination of Results Pertaining to the Variability Hypothesis

Predictions

The variability hypothesis, quoted below, provides predictions concerning the effect over time of interacting with fixated vs. flexible interactants on the variability of responses elicited:

Forward Experiment

111



Backward Experiment

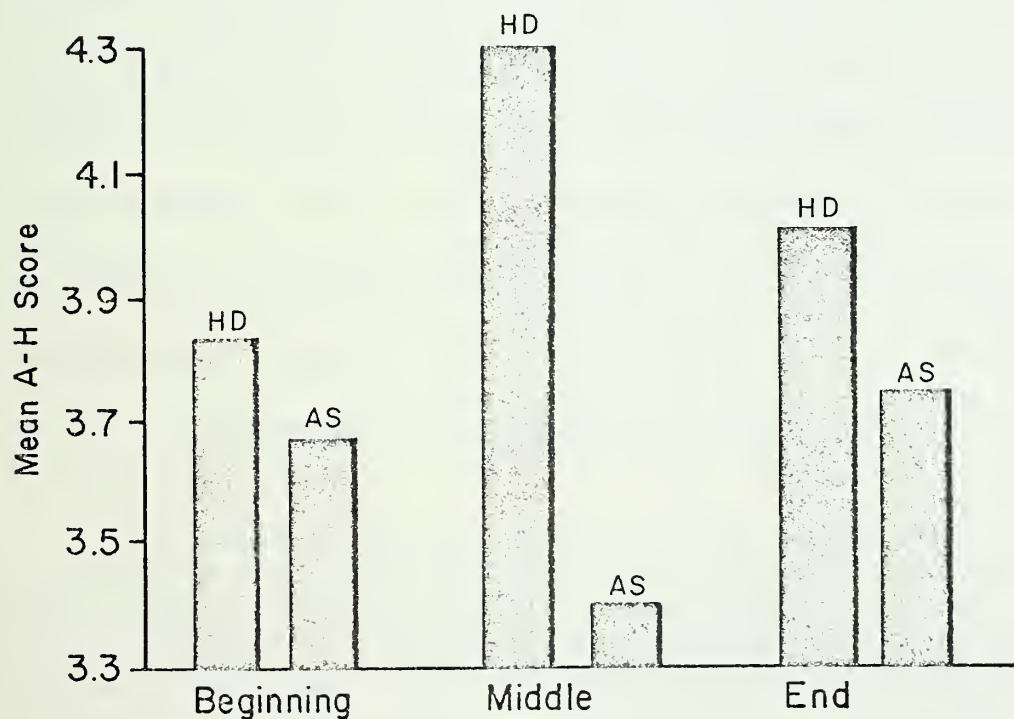


Figure 9. The Main Effect of Style on Beginning, Middle, and End A-H Mean Scores in the Forward and Backward Experiments

Hypothesis 2:

1. The variability of responses of subjects interacting with fixated interactants will decrease from the beginning to the end of the interaction on the dominance-submission dimension to a greater extent than the variability of subjects interacting with flexible interactants.
2. The variability of responses of subjects' interactants will decrease from the beginning to the end of the interaction on the hostility-affection dimension to a greater extent than the variability of responses of subjects interacting with flexible interactants.

Three sets of two 2×2 multivariate analyses of variance provided tests of the variability hypothesis. There were two dependent variables, a D-S variable and an A-H variable, in each of the six analyses. The dependent variables in each analysis were scores reflecting the difference in variability (on both the D-S dimension and the A-H dimension) between two phases of the interaction (beginning to end, beginning to middle, and middle to end) for the factors under examination (style, fixation, and style \times fixation). The dependent variable scores were derived by subtracting appropriate variability score values.¹ In the first set of analyses, beginning and end variability difference scores were contrasted for both the forward and backward experiments (see Table 12); in the second set of

¹ For example, in the contrast involving the main effect of style on the change of D-S variability from the beginning to the end of the interaction in the forward experiment, the D-S dependent variable for A-S subjects was derived as follows: The D-S beginning variability scores for subjects in the forward experiment responding to both fixated and flexible A-S interactants were summed. This value was then subtracted from the sum of the D-S end variability scores for subjects responding to both fixated and flexible A-S interactants. In the analysis, this score was compared to a similarly derived score for H-D subjects.

Table 12

Summary Multivariate Analysis of Variance for Beginning-End
 Variability Difference Score Contrasts--
 Forward and Backward Experiments

Variable	Source	df	MS	Univariate		Multivariate	
				F (1, 69)	p	F (2, 68)	p
<u>Forward</u>							
D-S			2016.41	1.88	.17		
A-H	A (flexibility)	1	36.10	.80	.80	.94	n. s.
D-S			6587.77	6.13	.01		
A-H	B (style)	1	52.90	.09	.77	3.04	.05
D-S			23.51	.02	.88		
A-H	AxB	1	666.94	1.09	.30	.54	n. s.
<u>Backward</u>							
D-S			59.21	.06	.81		
A-H	A	1	6.40	.01	.92	.03	n. s.
D-S			3156.55	2.94	.08		
A-H	B	1	528.04	.87	.64	1.80	n. s.
D-S			756.90	.70	.59		
A-H	AxB	1	298.84	.49	.51	.62	n. s.
D-S	Error	69	1074.09				
A-H			609.57				

analyses, beginning and middle variability difference scores were contrasted for each experiment (see Table 13); and in the third set of analyses, middle and end scores were contrasted (see Table 14).

In terms of the experimental design, it was expected that the response variability of subjects in both the H-D and A-S fixated groups would decrease as the interaction proceeded; and that there would be significantly more change for those subjects than for subjects who listened to the corresponding flexible tapes. Therefore, we predicted that the multivariate F ratio for the main effect of flexibility would prove to be significant in both the forward and backward experiments for all three phase contrasts. In addition, significant univariate F ratios for both the D-S and A-H contrasts of fixated vs. flexible conditions were anticipated in all six analyses. No significant effects for either the main effect of style or the style x flexibility interaction were expected.

Results

An examination of the results reveals that none of the predicted main effects for flexibility proved to be significant or even approached significance. The only multivariate F ratios which approached significance were in the forward experiment for the main effect of style where beginning-end ($F_{mult} = 3.04$; $p = .05$) and beginning-middle ($F_{mult} = 2.95$; $p = .06$) variability difference scores for H-D and A-S tapes were compared. In both instances, significant results were present in the forward

Table 13

Summary Multivariate Analysis of Variance for Beginning-Middle
 Variability Difference Score Contrasts--
 Forward and Backward Experiments

Variable	Source	df	MS	Univariate		Multivariate	
				F (1, 69)	p	F (2, 68)	p
<u>Forward</u>							
D-S			2.30	.003	.96		
A-H	A (flexibility)	1	537.20	1.58	.21	.78	n.s.
D-S			4674.89	5.88	.02		
A-H	B (style)	1	19.38	.06	.81	2.95	.06
D-S			290.07	.37	.55		
A-H	AxB	1	122.73	.36	.56	.34	n.s.
<u>Backward</u>							
D-S			306.60	.39	.54		
A-H	A	1	.18	.005	.98	.19	n.s.
D-S			26.79	.03	.85		
A-H	B	1	87.91	.26	.62	.14	n.s.
D-S			1879.81	2.37	.12		
A-H	AxB	1	93.17	.27	.61	1.33	n.s.
D-S			794.48				
A-H	Error	69	341.06				

Table 14

Summary Multivariate Analysis of Variance for Middle-End
 Variability Difference Score Contrasts--
 Forward and Backward Experiments

Variable	Source	df	MS	Univariate		Multivariate	
				F (1, 69)	p	F (2, 68)	p
<u>Forward</u>							
D-S			1882.58	2.19	.14		
A-H	A (flexibility)	1	294.78	.54	.53	1.79	n. s.
D-S			163.63	.19	.67		
A-H	B (style)	1	8.24	.02	.90	.09	n. s.
D-S			478.74	.59	.54		
A-H	AxB	1	217.47	.40	.54	.37	n. s.
<u>Backward</u>							
D-S			226.52	.26	.62		
A-H	A	1	1.89	.004	.95	.13	n. s.
D-S			4735.05	5.52	.02		
A-H	B	1	175.74	.32	.58	2.72	n. s.
D-S			221.26	.26	.69		
A-H	AxB	1	459.37	.84	.64	.45	n. s.
D-S	Error	69	857.93				
A-H			544.44				

experiment only and on the D-S dimension only (F_{univ} beg-end D-S = 6.13, $p = .01$; F_{univ} beg-middle D-S = 5.88, $p = .02$). In both instances the variability of subjects responding to H-D tapes decreased more than the variability of subjects responding to A-H tapes. These significant results are merely reflective of the greater variability of Cluster A H-D items (items 1, 2, 3) on the D-S dimension, as compared with Cluster A A-S items on the D-S dimension when they appear at the beginning of the interaction; and these results are not relevant to the variability hypothesis.¹ Because none of the main effects for fixation were significant, none of the results can be seen to offer confirmation for the variability hypothesis.

Examination of Results Pertaining to the Restriction Hypothesis

Predictions

The restriction hypothesis quoted below provides predictions concerning the effect over time on the extremity, or overall intensity, of responses elicited by fixated vs. flexible interactants from the subjects assigned to interact with them.

When comparing the responses of groups of subjects to fixated vs. flexible interactants making H-D and A-S statements, over time:

(a) Fixated H-D interactants will elicit more extreme responses on the D-S dimension than flexible H-D interactants.

¹ At the beginning of the interaction the following mean scores were attained for H-D items 1, 2, and 3, respectively, on the D-S dimension: 2.9, 3.6, 5.2. The corresponding scores for A-S items were as follows: item 1, 3.5; item 2, 4.1; item 3, 3.8.

- (b) Fixated H-D interactants will elicit more extremely submissive responses than flexible interactants making the same H-D statements.
- (c) Fixated H-D interactants will elicit more extreme responses on the A-H dimension than flexible H-D interactants.
- (d) Fixated H-D interactants will elicit more extremely hostile responses than flexible interactants making the same H-D statements.
- (e) Fixated A-S interactants will elicit more extreme responses on the D-S dimension than flexible A-S interactants.
- (f) Fixated A-S interactants will elicit more extremely dominant responses than flexible interactants making the same A-S statements.
- (g) Fixated A-S interactants will elicit more extreme responses on the A-H dimension than flexible A-S interactants.
- (h) Fixated A-S interactants will elicit more extremely affectionate responses than flexible interactants making the same A-S statements.

Three sets of 2×2 multivariate analyses of variance provided tests of the restriction hypothesis. There were two dependent variables, a D-S variable and an A-H variable, in each analysis. The dependent variables in each analysis were scores reflecting the difference in mean score values (on both the D-S dimension and the A-H dimension) between two phases of the interaction (beginning and end, beginning and middle, and middle and end) for the factors under examination (style, fixation, and style \times fixation). The dependent variable scores were derived by subtracting appropriate mean score values.¹ In the first set of analyses, beginning and end mean difference scores were contrasted

¹ For example, in the contrast involving the main effect of style on the change of D-S mean scores from the beginning to the end of the interaction, in the forward experiment the D-S dependent variable for A-S subjects was derived as follows: The D-S beginning mean scores for the subjects in the forward experiment responding to both fixated and flexible A-S interactants were summed. This value was then subtracted from the sum of the D-S end scores for subjects in the forward experiment responding to both fixated and flexible A-S interactants. In the analysis this score was compared to a similarly derived score for H-D subjects.

for both the forward and backward experiments (see Table 15); in the second set of analyses, beginning to middle mean difference scores were contrasted for both experiments (see Table 16); and in the third set of analyses, middle to end scores were contrasted (see Table 17).

It was expected that as the interaction proceeded subjects interacting with fixated interactants would become more restricted and, hence, more stylistically consistent in their responses than subjects interacting with flexible interactants. Therefore, as a group the "fixated" subjects should progressively respond more intensely, or more extremely, than the "flexible" subjects. The style of subjects' responses, i.e. the direction of their responses, should be consistent with the predictions of the style hypothesis. (I.e. subjects responding to fixated H-D interactants should become progressively more hostile and submissive. Subjects responding to fixated A-S interactants should become more affectionate and dominant. "Flexible" subjects should change significantly less than fixated subjects, but the style of the particular items they respond to should have some effect on their behavior.)

In terms of the experimental design, it was predicted that a significant style x flexibility interaction effect would be found in all three sets of analyses, with the strongest effects produced in the beginning to end comparisons. I.e. subjects' responding should differ as a result of the degree of fixation of the stimulus interactant and the style of the particular stimulus items to which subjects responded. Hence, even at the beginning

Table 15

Summary Multivariate Analysis of Variance for Beginning-End
 Mean Difference Score Contrasts--Forward
 and Backward Experiments

Variable	Source	df	MS	Univariate F (1, 69)	p	Multivariate F (2, 68)	p
<u>Forward</u>							
D-S			3.53	3.75	.05		
A-H	A (flexibility)	1				1.85	n.s.
			.01	.01	.93		
D-S			.09	.09	.76		
A-H	B (style)	1				.07	n.s.
			.04	.06	.80		
D-S			1.23	1.30	.26		
A-H	AxB	1				.64	n.s.
			.02	.03	.86		
<u>Backward</u>							
D-S			.10	.11	.74		
A-H	A	1				.71	n.s.
			1.00	1.39	.24		
D-S			.45	.48	.50		
A-H	B	1				1.06	n.s.
			1.13	1.81	.18		
D-S			1.69	1.79	.19		
A-H	AxB	1				1.03	n.s.
			.30	.41	.53		
D-S			.94				
A-H	Error	69					
			.72				

Table 16

Summary Multivariate Analysis of Variance for Beginning-Middle Mean Difference Score Contrasts--Forward and Backward Experiments

Variable	Source	df	MS	Univariate F (1, 69)	p	Multivariate F (2, 68)	p
<u>Forward</u>							
D-S			.01	1.01	.91		
A-H	A (flexibility)	1				.77	n. s.
D-S			3.08	3.64	.06		
A-H	B (style)	1	2.40	4.85	.03	5.46	.007
D-S			.84	.73	.60		
A-H	AxB	1	1.48	2.99	.08	1.58	n. s.
<u>Backward</u>							
D-S			7.27	8.61	.005		
A-H	A	1	.32	.65	.57	4.25	.02
D-S			.72	.85	.64		
A-H	B	1	4.94	10.00	.003	6.37	.003
D-S			.08	.09	.76		
A-H	AxB	1	.89	1.80	.18	.89	n. s.
D-S			.84				
A-H	Error	69					
			.49				

Table 17

Summary Multivariate Analysis of Variance for Middle-End
 Mean Difference Score Contrasts--Forward
 and Backward Experiments

Variable	Source	df	MS	Univariate F (1, 69)	p	Multivariate F (2, 68)	p
<u>Forward</u>							
D-S			3.93	5.79	.02		
A-H	A (flexibility)	1				3.40	.04
A-H			.58	1.29	.26		
D-S			2.12	3.13	.08		
A-H	B (style)	1				4.76	.01
A-H			3.10	6.83	.01		
D-S			.10	.15	.70		
A-H	AxB	1				1.31	n. s.
A-H			1.12	2.55	.11		
<u>Backward</u>							
D-S			4.63	6.83	.01		
A-H	A	1				3.39	.04
A-H			.01	.02	.88		
D-S			2.98	4.40	.04		
A-H	B	1				4.87	.01
A-H			2.63	5.82	.02		
D-S			1.46	2.15	.14		
A-H	AxB	1				1.56	n. s.
A-H			.49	1.09	.30		
D-S			.68				
A-H	Error	69					
A-H			.45				

of the interaction the style of the items being responded to should play a role in the kind of responses elicited. This effect should continue, but as the interaction proceeds the degree of fixation of the interactant should become progressively more important in determining the responses elicited. However, because the style of the items responded to should play a role at all phases of the interaction, in addition to significant style \times flexibility effects, significant main effects for style would also be anticipated. These effects should be consistent with, and due to, the results predicted by the style hypothesis.

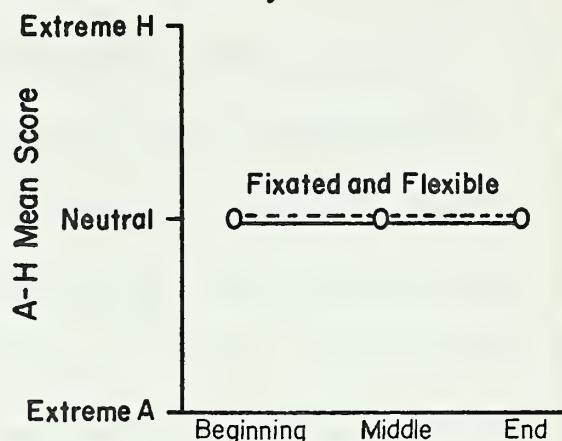
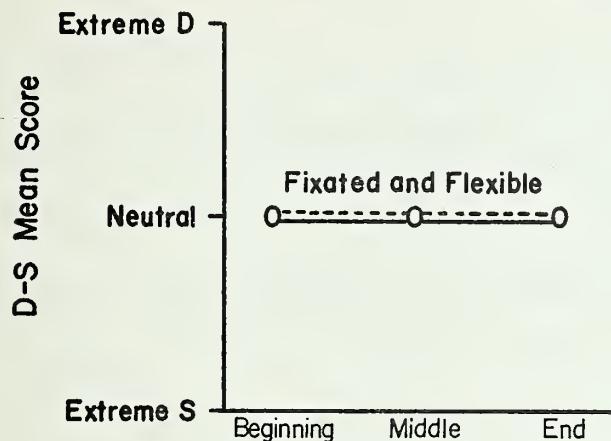
Mean scores for fixated H-D interactants should be opposite in direction to mean scores for fixated A-S interactants, so that when they are combined in deriving the dependent variables to test the main effect of flexibility they should cancel one another out. Therefore, when fixated and flexible mean difference scores are compared, the main effect of flexibility should not prove significant. A graph of the predicted pattern of results is presented in Figure 10 and should prove helpful in making the above predictions more understandable.

Results

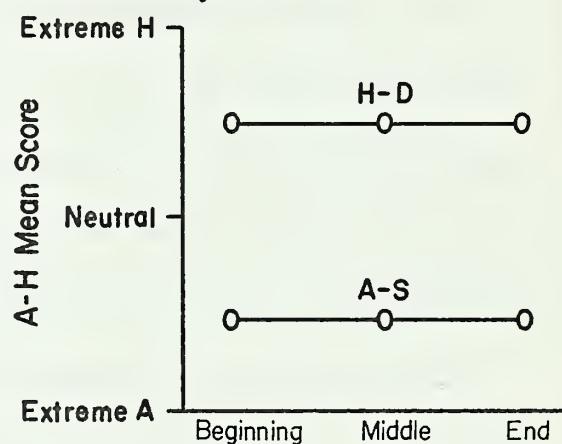
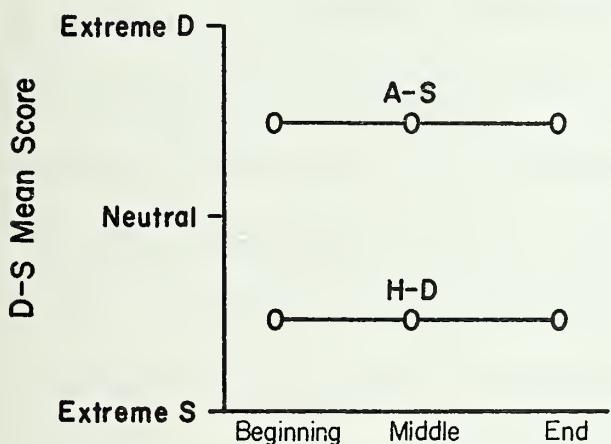
An examination of the results obtained reveals that none of the predicted style \times flexibility interaction effects proved to be significant or even approached significance. There were a number of significant multivariate F ratios for the main effect of style, all of which involved middle

The Main Effect of Flexibility

124



The Main Effect of Style



The Style x Fixation Interaction

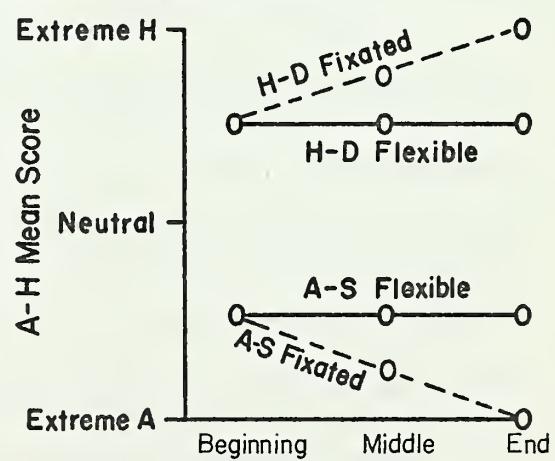
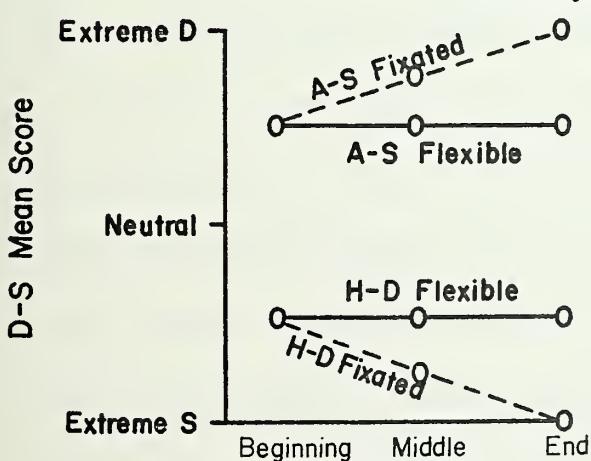


Figure 10. Predicted Pattern of Results for Analyses Relevant to the Restriction Hypothesis

items. In the forward experiment, significant style effects appeared where both beginning-middle ($F_{\text{mult}} = 4.76$; $p = .007$) and middle-end ($F_{\text{mult}} = 4.76$; $p = .01$) mean difference scores for H-D vs. A-S tapes were compared. In the backward experiment, the beginning-middle ($F_{\text{mult}} = 6.37$; $p = .003$) and middle-end ($F_{\text{mult}} = 4.87$; $p = .01$) contrasts also proved significant. In the forward experiment, significant univariate F ratios for the main effect of style occurred for those comparisons involving A-H dependent variables (F_{univ} for beginning-middle = 4.85, $p = .03$; F_{univ} for beginning-end = 6.83, $p = .01$); and trends toward significance occurred for those comparisons involving A-S variables (F_{univ} for beginning-middle = 3.64, $p = .06$; F_{univ} for middle-end = 3.13, $p = .08$). In the backward experiment the univariate F ratios for middle-end contrasts involving both the D-S and A-H dependent variables proved significant ($F_{\text{univ D-S}} = 4.40$, $p = .04$; $F_{\text{univ A-H}} = 5.82$, $p = .01$), while only that F ratio involving the A-H dependent variable proved significant for beginning-middle contrasts ($F_{\text{univ A-H}} = 10.00$, $p = .003$).

All of these results simply reflect an overall tendency on the part of the subjects to respond more extremely in the middle of the interaction than at either the beginning or the end (see Figures 7 and 8, pp. 101 and 109). Similarly, the significant results for the main effect of flexibility (F_{mult} for beginning-middle contrast in the backward experiment = 4.25, $p = .02$; F_{mult} for middle-end contrast in the forward experiment = 3.40, $p = .04$; F_{mult} for middle-end contrast in the backward experiment = 3.39,

$p = .04$) is reflective of the same tendency. Because none of the style x flexibility interaction effects were significant, none of the results can be seen to provide confirmation for the restriction hypothesis.

CHAPTER IV

DISCUSSION

With the exception of several contrasts employed to test the style hypothesis, the results of this experiment were basically non-confirmatory of the major hypotheses. Nevertheless, as a primarily exploratory study in an area in which there has not been a great deal of previous research, it is felt that the present experiment was a worthwhile undertaking and has made some contribution toward the empirical investigation of interpersonal style and interpersonal complementarity. In the three sections that follow, the results of this study will be considered and their implications will be discussed.

In the first section, the methodological attainments of the study will be presented by considering the inter-rater reliability results and the analyses involving the subjects' perception of the stimulus interactants. The rating system and the stimulus tapes utilized in this experiment will be considered in some detail. In the second section of this discussion, the results pertaining to the style hypothesis will be examined, and the implications of these results for understanding the mechanisms of complementary response evocation will be considered. In the third section,

the results pertaining to the variability and fixation hypotheses will be discussed. Since neither of these hypotheses were supported, a number of explanations to account for the non-confirmatory results will be offered. Throughout this discussion section, implications and suggestions for further research will be presented.

Methodological Attainments: The Rating System and the Stimulus Tapes

In addition to providing justification for using the ratings of subjects' responses to test the hypotheses of this experiment, the results pertaining to inter-rater reliability suggest that the rating system developed for this study could provide a workable method for coding interpersonal behavior in future research involving the Leary system.

The results pertaining to the perception of the stimulus interactants by the experimental subjects demonstrates that the intended experimental manipulations were effective. But, more generally, and perhaps more importantly, the highly significant perception data also suggest that stimulus tapes similar to those used in this experiment can be useful in researching a variety of problems in the area of interpersonal behavior.

The methodological attainments of this study, i.e. the rating system and the stimulus tapes, will be discussed at greater length in the two subsections that follow.

The rating system

The rating system developed for the present study provides a

number of advantages over methods previously used to code data in terms of the Leary system. In most of the previous research, ratings were made by deciding which octant or quadrant of the Leary Circle (category of behavior) best described the material being coded. Categories were generally loosely defined by listing series of words, or by providing examples of the kinds of behavior that fit the category in question. Terrill and Terrill (1965) did provide a more formal rating system, but they continued to use octants of the Leary Circle as the primary rating categories. With respect to the Leary Circle, category ratings entail two simultaneous decisions on the part of the raters, since a category is selected by assessing the convergence of two separate dimensions. For example, octant AP, Managerial-Autocratic (see Figure 1, p. 6), is both dominant and affectionate, but more dominant than affectionate. A two-step process of this nature can be confusing if it is not broken down further.

In none of the previous research was behavior rated more precisely than by deciding in which octant or quadrant it belonged. It is obvious, however, that behavior falling within a given category can vary substantially in its intensity or emphasis. By not taking this factor into account, a good deal of the impact of the behavior under question can be lost. It certainly does seem possible to add an intensity scale to each category, but making separate intensity ratings for each category might prove to be a cumbersome task for raters. In addition to relying on category ratings alone, most of the previously used systems failed to make allowance for

neutral statements; e.g. statements in which a clear-cut interpersonal position vis-a-vis the person being addressed is not expressed, statements which provide purely factual information, or statements which lack sufficient information for a rater to judge the interpersonal meaning intended to be conveyed. In those systems which do not provide for neutral ratings, raters are forced to code statements, such as those described above, by using an interpersonal category; and inter-rater reliability could conceivably be significantly affected.

The rating system utilized in the present study overcomes all of the shortcomings mentioned above. In addition to examples and key words, the rater's manual (see Appendix I) developed for the present study provides precise definitions, a formal conceptualization of the Leary system, and sample ratings. By providing two separate dimensions for coding each response, the rating system breaks down the process of making a category rating, thereby making it more explicit and more precise. The use of two 7-point scales for each dimension allows intensity to be taken into account automatically and leaves room to codify neutral ratings as well. Furthermore, by providing numerical, rather than category, ratings, the possibilities for data analysis are left more flexible. It should be noted that, from the experience of undertaking one study with one group of raters, the process of training individuals to use the system reliably does not appear to be a difficult task. Raters who did not have familiarity with the Leary system were able to learn to use the system in

a brief period of time. In addition, once the raters became familiar with the system they were able to code 80 responses within a 20- to 30-minute period. It would be worthwhile at a future time to have different groups of judges use different Leary-based systems to code the same samples of behavior and then to compare the results obtained.

There is still some question regarding the objectivity and validity of the present system, and these issues should be the focus of further study. The inter-rater reliability for the present study was certainly at an acceptable level. However, three judges rated relatively brief responses; and they rated all responses to statements having the same content at the same time. If the system is subjected to more general usage, it will be necessary to ascertain whether comparable levels of reliability can be demonstrated with judges rating samples derived from more natural contexts, e.g. group discussions, or longer dyadic interactions in which both interactants have equal input. It also seems possible that the rating system could have value for assessing the preferred style of a given individual if his behavior were studied in contexts devised to elicit stylistic preference.

Questions of the validity of the present system also need further exploration. Concurrent validity could be ascertained by comparing assessments of an individual's preferred style, determined by using the present system, to assessments obtained from friends, interviews conducted by clinicians, and by examining historical, diagnostic, or other

data. It would, however, be most important to demonstrate theoretical, or construct, validity if the rating system were to be used as a tool in future empirical investigations of interpersonal style and interpersonal complementarity. Terrill and Terrill (1965) suggest that, "the main way in which theoretical validity of the [a] rating scheme could be studied would be in connection with Leary's 'pull' [complementarity] hypothesis (p. 288)." The significant results for parts of the style hypotheses obtained in the present study provide some initial indications of construct validity. Further study, of course, must be undertaken.

The stimulus tapes

The analyses involving the ICL perception data indicate that it is possible to simulate interactants of differing stylistic orientation and flexibility by appropriately combining tape-recorded statements performed in different styles. Contrasts of subjects' perception of fixated H-D vs. fixated A-S, and of fixated vs. flexible interactants, all proved to be highly significant on both the D-S and A-H dimensions. As we shall see in the third section of this chapter, there is cause to wonder whether the stimulus materials utilized in the present study provided the optimal method for studying interaction, and more specifically, for studying changes in interaction style over time. However, subjects appeared to have little difficulty forming impressions of the "people" with whom they interacted; and these impressions were consistent with expectations

derived from the composition of the tapes. Therefore, it appears that stimulus materials of the type used in this experiment might be particularly suitable for studying interpersonal perception and impression formation.

To this author's knowledge there has been only one study (Edquist, 1973) which deals with either the relationship between an individual's preferred interpersonal style and the way in which he perceives and forms impressions of others, or which deals with the effect that individuals with differing interpersonal orientation and degrees of flexibility have upon the impressions others form of them. It is felt that the stimulus materials utilized in the present study can provide a useful tool for investigations of these issues as well as specific questions, such as the following: Are there differences in the accuracy with which individuals with a given stylistic preference perceive others whose stylistic preference is similar to, or different from, their own? What are the most salient and helpful features used to form impressions of interpersonal style? Are there differences in the degree of empathy or understanding that individuals with a given stylistic preference can communicate, or feel, towards others whose stylistic preference is similar to, or different from, their own? Are there particular stereotypes associated with individuals with differing stylistic preference and differing degrees of stylistic flexibility?

With regard to the last question, it is interesting to note that an informal examination of the written responses of the subjects in this study

to the question, "What do you think the person you just interacted with looks like?", suggests that there may indeed be physical stereotypes associated with given stylistic modes. For example, of the 20 subjects who interacted with the fixated H-D interactant, 11 mentioned height in their descriptions; 6 subjects said the interactant was tall; 5 said she was of average height; and none said she was short. Nine subjects who were exposed to the fixated A-S interactant also mentioned height. But of those 9 subjects, only 3 said the interactant was either tall or of average height; the other 6 subjects said she was short. Seven subjects listening to the fixated H-D tape mentioned physical attractiveness, 5 subjects said the interactant was attractive or pretty, and 2 said she was unattractive or ugly. Of the 11 subjects who mentioned the physical appearance of the fixated A-S interactant, 9 said she was "average" or "plain" looking, and only 2 said she was attractive. A study using semantic differential scales to derive information about physical and other attributes associated with different stylistic orientations could certainly provide more information regarding stereotypes and the implicit personality theories held by subjects.

Interpersonal Complementarity: Discussion of the
Results Pertaining to the Style Hypothesis

The results of the analyses comparing A-H responding to H-D vs. A-S stimuli were clearly supportive of the style hypothesis. Subjects were found to respond differently on the A-H dimension to H-D statements

than to A-S statements (support for Hypothesis 1c); and they responded with more hostility to H-D statements than to A-S statements (support for Hypothesis 1d). These findings are consistent with the notion that A-H complementarity occurs on the basis of correspondence (Carson, 1969). They are also consistent with the findings of empirical studies pertaining to complementarity (Heller, Myers, & Kline, 1963; Mueller, 1969; Raush, Dittman, & Taylor, 1959; Raush, Farbman, & Llewellyn, 1960; Shannon & Guerney, 1973), in which hostility was seen to evoke hostility and affection to evoke affection.

It is interesting to note that in both the forward and backward experiments differences between subjects' A-H responses to H-D vs. A-S stimuli were most discrepant in the middle phase of the interaction (see Figure 8, p. 109). These more pronounced differences were, for the most part, the result of both more hostile responding to H-D items and more affectionate responding to A-S items, in the middle of the interaction, than either at the beginning or the end. As explained earlier (p. 52), the middle items were of higher intensity than the beginning and end items. And initially it appears as if this fact could explain why subjects responded with higher intensity during the middle of the interaction. Intensity, however, was not a factor under investigation when the present experiment was planned. Consequently, there were no tapes containing low-intensity middle items to act as controls for the higher intensity middle items. It is, therefore, not possible to ascertain accurately

whether the stronger A-H effect produced by the middle items was the result of the higher intensity of these items, their position, or some combination of the two.

Unlike the generally significant results involving the A-H dependent variables, there is only minimal evidence to support the predictions of the style hypothesis with regard to D-S responding. Of the six comparisons involving D-S responding, only one proved significant ($F = 3.73$, $p = .05$, for the D-S end comparison in the backward experiment); and there was a trend toward significance in a second ($F = 3.31$, $p = .07$, for the D-S middle comparison in the forward experiment). Before attempting to explain why the D-S results were basically non-confirmatory, it will first be necessary to explore further the two above-mentioned comparisons, to examine the pattern of the results obtained for all of the D-S comparisons, and to reexamine the complementarity research already undertaken.

The significant trend for the D-S middle comparison indicates that the H-D statements elicited more submissive responding than A-S statements. These results support both Hypotheses 1a and 1b. However, the significant D-S end comparison indicates that H-D statements elicited more dominant responding than A-S statements. These results support Hypothesis 1a, but offer results opposite in direction to the prediction of Hypothesis 1b.

Inspection of Figure 8 (p. 109) reveals an interesting pattern of

results, for all of the D-S comparisons. This pattern is consistent with the significant, or near significant, findings described above: i.e. at the beginning and end of the interaction H-D statements elicited more dominant responding than A-S statements, while in the middle of the interaction H-D statements elicited more submissive responding than A-S statements. Thus, as with the results involving the A-H dependent variable, the present results offer the suggestion that the middle items had a different impact, on the responses they elicited, from the beginning and end items.¹

Assuming for a moment that all of the D-S comparisons proved significant, that the pattern of D-S results remained the same, and that the difference between the responses evoked by the higher and lower intensity items could be shown to be primarily the result of their intensity, an interesting difference between the mechanism of A-H and D-S complementary response evocation would emerge. Regardless of intensity, A-H complementarity would always be seen to occur on the basis of correspondence (A elicits A and H elicits H). And higher intensity items would be seen to have the effect of simply amplifying the degree of correspondence elicited. However, with D-S complementarity the mechanism

¹ Because of the failure of most D-S comparisons to reach significance, and because of the lack of controls for intensity discussed above, it is only on the most speculative basis that this statement can be offered. However, because the same pattern of results is replicated over both experiments, there does appear to be some cause for taking it into account.

would be seen to be more complex. With high-intensity stimuli, D-S complementarity would be seen to occur on the basis of reciprocity (D elicits S and S elicits D), as predicted by Carson (1969). But with low-intensity stimuli, D-S complementarity would be seen to occur on the basis of correspondence.

If further, more carefully controlled, studies were undertaken in which responses to statements of varying levels of intensity were compared, and if these studies proved the above reformulation of the D-S complementarity hypothesis to be valid, the D-S complementarity hypothesis might be refined to read: Complementarity in respect to the dominance-submission axis occurs on the basis of both correspondence and reciprocity. The specific mechanism operating depends upon the intensity of the stimulus presented. At lower levels of intensity, dominance tends to induce dominance and submission to induce submission, but at higher levels of intensity dominance tends to induce submission and vice versa.

There is evidence in the empirical studies of complementarity reviewed earlier (see pp. 13 - 19) to suggest that, at least when paired with hostility, D-S complementarity may indeed occur on the basis of both reciprocity and correspondence. Two of the studies (Heller, Myers, & Kline, 1963; Raush, Dittman, & Taylor, 1959) support the notion that D-S complementarity always occurs on the basis of reciprocity, while two other studies (Mueller, 1969; Shannon & Guerney, 1973) indicate that

when paired with hostility D-S complementarity tends to occur on the basis of correspondence. If the subject population and interaction context employed in each of the studies are considered, the seemingly contradictory results can be made understandable. Furthermore, these results can be seen to offer support for the complementarity hypothesis as reformulated above, at least where H-D and A-S stimuli are concerned.¹

In the Heller, Myers, and Kline (1963) study, actors trained to play the role of psychotherapy clients with varying stylistic orientations were seen to elicit reciprocal D-S behavior from interviewers-in-training. In the Raush, Dittman, and Taylor (1959) study, boys with "intense personality disturbance (p. 11)," enrolled in a residential treatment facility, were seen to elicit reciprocal D-S behavior from one another. If we can assume that the interpersonal behavior of individuals in treatment, or pretending to be in need of treatment, is more intense than the behavior generally expected from non-troubled individuals, then the evidence for D-S complementarity occurring on the basis of reciprocity appears to be derived from investigations of the effects of more intense D-S behavior.

In the Shannon and Guerney (1973) study, evidence for D-S

¹ All of the studies in which complementarity was investigated offer support for the notion that D-S complementarity occurs on the basis of reciprocity when D and S stimuli are paired with affection. Therefore, when these studies are discussed below only H-D and H-S complementarity results will be considered.

complementarity occurring on the basis of correspondence was derived from studying the interpersonal behavior of college students involved in topic-oriented discussion groups. Such a situation would appear to offer less of an opportunity for intense responding than the situations of the Heller et al. and Raush et al. studies described above. The results of the Mueller (1969) study are more complex. Mueller's data were derived from studying interaction between therapist-patient dyads during one interview in the early stage of psychotherapy and one interview in the later stage. In the Mueller study there is evidence for D-S complementarity occurring on the basis of both correspondence and reciprocity. During the early interviews there is a stronger case for correspondence. But during the later-phase interviews, the relationship between dominance and submission becomes more reciprocal. One of the criteria Mueller used to select the later interviews was "that the S was anxious during the interview in question (1969, p. 5)." More intense interpersonal behavior would certainly be expected from an anxious client involved in an established treatment relationship than from the same client from whom treatment has recently been initiated. If this is the case, then the fact that different bases for complementarity seemed to be operating in different phases of the treatment can be seen to support the revised complementarity hypothesis.

In conclusion, the results of the empirical studies already undertaken can be interpreted to suggest that, when D and S stimuli are coupled

with hostility, D-S complementarity occurs on the basis of correspondence with lower intensity stimuli and on the basis of reciprocity with higher intensity stimuli, i.e. opposite D-S complementarity mechanisms are operative. If, however, D and S stimuli are coupled with affection, the results of the previous studies strongly suggest that D-S complementarity occurs on the basis of reciprocity, regardless of the intensity of the stimuli.

If the above formulation of the operation of D-S complementarity is accurate, there would be some basis for understanding why, in the present study, the D-S style hypothesis was not confirmed. In testing the style hypothesis, responses to A-S and H-D stimuli were compared. If the same D-S complementarity mechanism (reciprocity) operates for higher intensity H-D and A-S stimuli and opposite mechanisms operate for lower intensity H-D and A-S stimuli, then in the present study significant findings would be expected primarily for the D-S middle comparisons. Inspection of the results reveals that, of the four beginning and end D-S comparisons (involving lower intensity stimuli), only one was significant (at the .05 level); while of the two middle D-S comparisons (involving higher intensity stimuli), there was a trend toward significance (at the .07 level) for one comparison. Although the above explanation for the relative lack of significant findings for D-S comparisons is not a compelling one, it does appear to be a feasible one. It is only in a more carefully controlled experiment, with a larger population of

subjects, that it can be tested out.

In summary, the results of the present study strongly support the style hypothesis with regard to A-H stimuli. These results are consistent with theoretical notions pertaining to interpersonal complementarity and with the results of previous empirical studies. The data of the present study, however, failed to support the style hypothesis with regard to D-S stimuli. Although there are no definite or clear-cut explanations of the results obtained, close inspection of these results, along with re-examination of empirical studies already undertaken, led to the derivation of some interesting hypotheses regarding the operation of D-S complementarity. These hypotheses clearly need to be tested in future studies.

All of the results obtained in testing the style hypothesis suggest that intensity is an important factor to consider in the study of interpersonal complementarity. Although this need has already been recognized (McKenzie, 1968; Terrill & Terrill, 1965), to this author's knowledge the effect of different levels of stimulus intensity upon interpersonal responding has not been investigated in any of the research on the Leary system undertaken to date. The rating system utilized in the present study offers the possibility of considering the effect of intensity, and the results of the present study again point to the need for doing so.

The Disordered Evocation of Complementary Responses:
Discussion of Results Pertaining to the Variability
and Restriction Hypotheses

Both the variability and restriction hypotheses involve predictions concerning changes in the variability and stylistic mode of the responses of groups of subjects as the interaction progresses from beginning to end. It was predicted that such change would be the result of either the level of fixation of the interactant (in the variability hypothesis), or the combined effect of style and fixation (in the restriction hypothesis). Scores reflecting the difference in variability and magnitude of response over different phases of the interaction were utilized as the dependent variables in testing the hypotheses. The results of those analyses comparing variability difference scores, and those analyses comparing mean difference scores, offered no support for either of the hypotheses under discussion. The significant results attained for the analyses pertaining to both the variability and the restriction hypotheses were seen to be reflective of characteristics of the specific items being responded to, rather than to the predicted qualities of the interactant.

The basic assumption behind both the variability and the restriction hypotheses is that over time rigid, inflexible responding elicits similarly rigid, inflexible responding from others, while more flexible responding allows others more freedom and hence is responded to with greater flexibility. Both hypotheses were derived from Leary's and Carson's notions about the way in which "disordered" individuals operate to satisfy their

strong needs for self-image confirmation.

In the discussion that follows, a number of explanations of the non- confirmatory results will be offered. In the first set of explanations, it will be assumed that the methodology employed was adequate for testing the hypotheses, and aspects of the conceptual foundations of the hypotheses will be questioned. In the second set of explanations, it will be assumed that the theoretical notions underlying the hypotheses are accurate; methodological problems, which may have resulted in an invalid test of the hypotheses, will be discussed. Suggestions for further research will be offered throughout.

Explanations of the results leading to questions
about the underlying theoretical notions

As noted earlier (pp. 26-27), Carson (1969) describes three means by which a "disordered" individual might evoke complementary responses. He can assume his preferred stance rigidly and continuously, he can respond with such intensity that the other is "shocked" into responding in a complementary fashion, or he can do both. Carson does not differentiate between these means of disordered complementary response evocations, implying that all are equally effective. Consequently, in preparing the stimulus materials for the present study, the criterion utilized for differentiating between fixated and flexible interactants was the percentage of statements made in a given stylistic mode. Although there were a few responses of high intensity included on some of the tapes,

most of the statements on the tapes were of low or moderate intensity. Rigidity was, therefore, the primary evocation mechanism under study. It is conceivable, then, that high intensity, or a combination of rigidity and high intensity, is necessary to produce the kind of disordered response evocation described by Carson; and that the formulation Carson provides needs revision. If this is the case, then further research, in which rigidity, high intensity, and rigidity combined with high intensity could be studied more carefully, would be necessary to sharpen the theoretical notions offered by Carson.

In the present study, both the beginning and end items were deliberately selected to be of low intensity. In using low-intensity items to test the variability and restriction hypotheses, it was assumed that subjects would overreact to fixated interactants by responding in a highly complementary fashion, even when the specific stimuli did not pull for such fixated responding. In contrast, it was assumed that flexible interactants would respond more to the pull of the item at hand, and consequently would demonstrate less complementary responding. If this had occurred, disordered evocation of complementary responses would certainly have been demonstrated. However, it is conceivable that disordered evocation of complementary responses would be more evident with responses that are not of low intensity; i.e. with higher intensity items, some subjects responding to a flexible interactant might respond to the pull of the statement at hand, but others would respond in a non-

complementary fashion, in order to induce the interactant to change his style. Subjects responding to fixated interactants, however, would be more "hooked" into a relationship-confirming stance and would overwhelmingly respond to the pull of the item. The theoretical notions offered by Leary and Carson are not specific enough to differentiate between the two processes described above, and would predict that both should occur. Again, using key items of different intensity levels would be necessary to test this explanation of the results.

Leary (1957) suggests that disordered complementary response evocation occurs quite rapidly. As noted previously, he says, "Many subjects with maladaptive interpersonal patterns can provoke the expected response from a complete stranger in a matter of minutes (p. 116)." Therefore, in designing the present study it was felt that a 20-minute, 36-statement interaction would be sufficient to produce the desired effect. However, it is certainly possible that a longer period of time, and/or a series of encounters, are necessary before disordered complementary response evocation would occur. Future studies could easily be designed to take these factors into account.

Possible methodological problems that could account for the non-confirmation of the hypotheses

The most obvious difficulty with the methodology employed in the present study is that tape recordings were employed to simulate a "real

person." In the questionnaire they completed at the end of the study, many subjects commented upon the difficulty they had "talking to a tape recorder," and upon other aspects relating to the unreality of the experimental situation. Leary's and Carson's notions about disordered evocation of complementary responses are based upon observation of real people involved in real situations.

A more effective way to test out Leary's and Carson's notions might be to involve trained actors in in vivo interaction with experimental subjects, such as was done by Heller, Myers, and Kline (1963). If this is not possible, then video tapes might be used instead of audio tapes. With such stimulus materials, at least important non-verbal cues, such as facial expression and posturing, would be provided and might make for a more "real" encounter. With the absence of such cues, it is much easier for subjects to respond to "items" rather than "people," and in this way not have to deal with the cumulative impact of the interaction. In fact, several subjects spontaneously commented that they were sure that the "person" on the tape was actually at least "two different people."

The assumption was made in constructing the stimulus materials that a person interacting with 75% of statements uttered in one stylistic mode was "fixated" and "pathological," while a person interacting with 25% of statements uttered in each of the four stylistic modes was "flexible" and "normal." It certainly is possible that a different combination of items than the one employed is necessary to simulate either type, or

both types, of interactants. In studying college students involved in issue-oriented discussion groups, Shannon and Guerney (1973) found H-S statements to comprise only 3.1% of the total response, while A-D responses comprised 69% (p. 145). In the present study, both H-S and A-D statements comprised 25% of the total responses uttered by the flexible interactants. However, the interaction contexts of the two studies were different. Furthermore, in the present study subjects did differentiate between fixated and flexible interactants at a highly significant level (using the ICL); but an obvious oversight was evident in not providing a question for subjects at the end specifically worded to determine the degree of pathology perceived in each type of interactant. Further research is certainly necessary to help provide more precise definitions of fixated and flexible interactants, in terms of the percentage of responses offered in particular stylistic modalities.

APPENDIX I

INSTRUCTIONS TO RATERS

I. Introduction

Interpersonal style corresponds to surface behavior and the impact behavior has in particular situations. It is not necessarily directly related to underlying motives, feelings, intentions or dynamics. An individual's interpersonal style, to use an analogy, is the position, stance or posture he prefers to assume in relating to others. Position is assessed primarily from the connotation, rather than the content, of what one is saying. It is the message one gives as to where he stands vis-a-vis another person. Consider the following set of statements:

- 1) "I invited you to dinner on Monday and you haven't let me know whether you are coming yet. I know you're a busy man. But I want a reply."
- 2) "I invited you to dinner on Monday and you haven't let me know whether you are coming yet. I know how busy you are, but if you can let me know soon, I would really appreciate it." In each statement the information conveyed is essentially the same, but the stances assumed by the people making the statements differ.

One can meaningfully talk about positioning as occurring on two dimensions--vertical and horizontal. Vertical positioning refers to an

individual's preferred stance on the dimension: "Above-Below" or "Dominance-Submission." The Dominance-Submission dimension includes behaviors which are dominant, assertive, ascendant, leading, controlling, etc., on the one hand, and submissive, retiring, obsequious, unassertive, following, etc., on the other. Horizontal positioning refers to the stance one assumes in relating to others on the dimension "Towards-Against" or "Hostility-Affection." The Hostility-Affection dimension characterizes the "flow of affect" between two people relating, and includes behaviors which are hateful, aggressive, rejecting, punishing, attacking, disaffiliative, etc., on the one hand, and accepting, loving, affectionate, affiliative, friendly, etc., on the other.

II. The Rating System

When a group of responses is collected, you, as a rater, will be asked to assign each response to appropriate interpersonal categories. You will be asked to rate each response on two seven-point dimensions: Dominance-Submission and Hostility-Affection. For each response you rate, you will have a maximum of four tasks. Your first task will be to examine the response with respect to Dominance-Submission and decide whether it is Dominant, Submissive or Neutral. (Neutral responses are responses which can be classified as neither Dominant nor Submissive.) The next task is to examine the response with respect to Hostility-Affection and decide whether it is Hostile-Affectionate or Neutral. (Here

Neutral responses are responses which can be classified as neither Hostile nor Affectionate.)

The two tasks described above deal with ratings concerning the quality of the response. The last two tasks are concerned with intensity ratings, i. e., you will decide how Dominant, Submissive, Hostile or Affectionate the response is. (Neutral responses automatically receive an intensity rating of 4. The reason for this will become clear as you read on.) The third task involves Dominance-Submission (D-S) intensity ratings. If you think a response falls on either the Dominance or the Submission side of the D-S dimension, you should further classify it as falling within one of three divisions: High, Moderate or Low. The fourth task involves Hostility-Affection (H-A) intensity ratings. If you think the response falls on the Hostility or the Affection side of the H-A dimension, you should also rate it as High, Moderate or Low.

In the early stages of rating, you may want to follow this step-by-step procedure, but as you become more familiar with the system you will be able to make ratings quickly--almost automatically--and may not need to go through each step sequentially.

A two-number system is used for rating each response. The first number is the rating on the D-S dimension, and it can be any number from 1 to 7. The second number is the rating on the H-A dimension, and it too can be any number from 1 to 7. Ratings of 1, 2 and 3 represent High, Moderate and Low Submission or Affection, respectively. Ratings

of 5, 6 and 7 represent Low, Moderate or High Dominance or Hostility, respectively. A rating of 4 represents a Neutral rating on either dimension. Figure 1 below presents a graphic representation of the rating system. This figure, along with the examples that follow it, should serve to eliminate any confusion about what the rating numbers represent.

Dominance		Neutral			Submission		
7	6	5	4	3	2	1	
High	Mod.	Low	Neut.	Low	Mod.	High	

Hostility		Neutral			Affection		
7	6	5	4	3	2	1	
High	Mod.	Low	Neut.	Low	Mod.	High	

Figure 1. Graphic Representation of the Rating System.

Example 1: A rating of 7;2 means High Dom.; Mod. Aff.

Example 2: A rating of 3;4 means Low Sub.; Neutral H-A.

Example 3: A rating of 1;6 means High Sub.; Mod. Host.

Example 4: A rating of 4;4 means Neutral D-S; Neutral H-A.

In the proceeding four sections you will be provided with guidelines for making quality and intensity ratings. Each section deals with a different variable (Section III, Dominance; Section IV, Submission; Section V, Hostility; Section VI, Affection). In Part A of each section behaviors which are within the range of the variable under consideration will be listed. These lists should help provide more extensive information about the variables and should be helpful in making quality ratings.

In Part B of each section a caricature of people whose interpersonal

behaviors are predominantly those of the variable under question will be presented. These caricatures are exaggerated pictures, but they could be even more helpful than the list of behaviors in Section A for getting a feeling of what the variable is about. In Part C of each section principles for making intensity ratings will be provided; and in Part D examples of specific responses that are High, Moderate and Low on each variable will be listed.

Before proceeding with the guidelines, there is an important point about this rating system that should be made clear. It is important too that it is surface behavior that is being rated. The primary focus should be upon the impact behavior has in the situation under observation, and not in the motives or intentions of the person who is making the response. For example, assume you know that A dislikes B, because B is always nasty to A, A tells you he dislikes B and A even says, "The next time I see B I am going to be hostile to him." Assume further that the next time A sees B we watch them and B says to A, "Boy, you look sloppy today"; and A responds, "You look good today," in a sincere, affectionate tone of voice. Now if we had to rate A's statement we would rate it as affectionate, even though we have information which would indicate that A wants to be hostile, A has a right to be hostile and A may even feel hostile underneath. Raters who are used to viewing behavior in terms of underlying dynamics and motivations often find it confusing, difficult or even irritating to rate just surface behavior. Such an attitude is

understandable, but it is important for the purposes of this research to stay with the impact the behavior has in the given situation and rate statements accordingly.

III. Dominance--Vertical "Above" Positioning

A. Some behaviors that fall in the domain of Dominance. Rating for quality.

Bossing; dictating; commanding; telling people what to do or how to do it; disciplining; blaming others; censuring; judging; criticizing; competing; rivaling; showing off; offering to "take over"; taking initiative; leading; directing; managing; controlling; asserting; offering help, advice, suggestions, guidance; explaining; instructing; informing.

B. Caricature of Dominance

Puts self in "above" position by treating others as "children" needing information, help, love, comfort, guidance, direction, sanctions, prohibitions, discipline, "straightening out" or "the word"; and by showing his own strength, superiority or power. Makes decisions with confidence in terms of what he sees as the "right way." Reacts to stress by asserting authority, competing, blaming others or seeking out others to comfort, direct or punish.

Upright posture. Presumptuous presentation of self. Uses gestures like extended or pointed finger, open arms, or "patting on the head." Stern, assertive, commanding, confident tone of voice. Uses

imperative or moralistic tone in writing. Uses phrases like, "you ought, had better, should, or must," "the best thing for you is . . .," "shape up," "poor thing," "do . . .!" "don't . . .!"

C. Rating for intensity

In the sections dealing with intensity ratings, the person who makes a response, or statement, will be referred to as the Sender and the person to whom the statement is directed as the Receiver, or Recipient.

The analogy of Dominance as "Above" positioning can be extended to include intensity. If a person's response reveals that he is presenting himself to be "above" (dominant in relationship to) the person he is interacting with, we can ask: "How far 'above' is he putting himself?" The answer to this question will tell us something about the intensity of his response. Using the positioning analogy, we can say that a Dominant Sender presents himself as assuming an upright posture. By examining his statement we can also infer how he is viewing the person he is interacting with (the Receiver), and can thereby classify his response as being High, Moderate or Low with respect to Dominance; so that:

1. A Sender making a High Dominant response views the Receiver as lying prone, or kneeling.
2. A Sender making a Moderate Dominant response views the Receiver as being stooped over, or in the process of getting up. (Here the Recipient is seen as basically able to stand, but not doing so.)

3. A Sender making a Low Dominant response views the Receiver as standing upright, but as somehow differently situated than he is. Here the Sender sees the Receiver as merely not having the same perspective that he does.

Bearing the above analogy and the Dominance caricature in mind, the following principles should prove helpful in discriminating among the three levels of Dominance:

1. High Dominance: 7 rating

The attitude of the Sender is of complete superiority, control, and/or direction (etc.), over the Receiver, so that the Receiver is not granted any room to qualify or question the Sender's advice, sanction, command (etc.), or his definition of the situation. The Sender's behavior is intrusive and autocratic so that the help, suggestion, correction (etc.) he gives the Receiver is imposed or dictated, rather than offered or suggested. The Sender acts as if he is talking to a needy, helpless, misdirected child; i. e., he views the Receiver as being in a prone or kneeling position.

2. Moderate Dominance: 6 rating

The Receiver is seen in a more mature position than a helpless, needy or misdirected child, but he is not viewed as the Sender's peer or equal. The attitude of the Sender is still one of superiority, control or direction over the Receiver, but it is not absolute. Also, the attitude of the Sender is less intrusive and autocratic so that the Receiver is, at

least implicitly, conceded some room to qualify or question the Sender's statement.

3. Low Dominance: 5 rating

The Sender sees the Receiver as essentially his peer or equal; but one who is lacking the Sender's perspective or who is for the moment in need, or "out of step." The Sender's superiority, control, etc., is presented as being merely incidental, rather than inherent. The attitude of the Sender is not intrusive or autocratic, but that of one who offers help, direction, correction (etc.) in such a way that it can be accepted, questioned, qualified or ultimately rejected.

D. Examples of Low, Moderate and High Dominant responses to a sample statement

Sample statement: "I'm going to make plane reservations for Florida for spring vacation."

High Dominant Responses	1. You've waited too long to make reservations. You'll never get a seat now, stupid. 2. You can't go! You have three term papers to do. 3. Don't make reservations! I'm driving to Florida. You come with me!
Moderate Dominant Responses	1. I think you waited too long. You'd better do it now. Flights are booked far in advance. 2. How can you do three term papers and go on vacation? 3. Why make reservations? I'm driving to Florida. Why don't you come with me?
Low Dominant Responses	1. I think you may have waited too long. Reservations are often hard to get this late. 2. What are you planning to do about the three term papers you have to write? 3. I'm driving to Florida. If you'd like you can come with me.

IV. Submission--Vertical "Below" Positioning

A. Some behaviors that fall in the domain of Submission. Rating for quality.

Conforming; following; persuasible; apologizing; assuming or accepting blame, tentativeness; indecisiveness; subservience; ingratiation; obsequiousness; unassertiveness; self-criticizing; underrating own skill or accomplishment; modesty; asking for assurance, advice, guidance, information, etc.; acting confused; acting guilty; whining; complaining; cowering.

B. Caricature of Submission

Puts self in "below" position of a needy, fearful, helpless, naive, neglected, naughty, guilty, rejected, or incompetent child who needs help, guidance, information, sanction, comfort, or direction from others. Emphasizes his own weakness, need, incompetence or lack of knowledge. Makes decisions with great difficulty and usually avoids making decisions by following or constantly searching for the directions, suggestions or commands of others. Reacts to stress by seeking help, blaming self, withdrawing, complaining or finding others to respect and obey.

Cowering posture. Diffident or obsequious presentation of self. Uses gestures like lowered head, averted glance, "naive look," or pouting. Whining, fearful, plaintive, compliant or naive tone of voice. Uses expressions like, "Oh, no!", "I can't," "Oh, my God"; "What am I going

to do?", "What would I do without you," or "I'm such a dope."

C. Rating for intensity

Extending the position analogy to Submission, the Submissive Sender can be seen as himself assuming one of three positions: (1) Low Submission--upright; (2) Moderate Submission--stooped or in the process of getting up; (3) High Submission--prone or kneeling.

Bearing this analogy and the Submission caricature in mind, the following principles should be helpful in making intensity ratings of Submission:

1. Low Submission: 3 rating

The Sender sees himself as essentially the Receiver's equal or peer. But, for the moment, is in a position of need. The Receiver is invited to dominant status, but only within defined limits. The Sender's communication is not an imposition, or plea, and the Receiver is given room to qualify, question or ultimately reject the Sender's invitation.

2. Moderate Submission: 2 rating

The attitude of the Sender is not of complete inferiority, helplessness, confusion, guilt (etc.), but it is also not the attitude of one who is in complete control. The Sender indicates that his need, inferiority (etc.) is substantial, but that he does not wish the Receiver to be completely dominant. (The Sender is not without at least a sense of self-worth or sufficiency.) The Sender's request to the Receiver is not a helpless plea but also not merely an invitation. Consequently, the

Receiver is allowed some options to qualify the Sender's definition of himself or the situation.

3. High Submission: 1 rating

The attitude of the Sender is one of definite inferiority, helplessness (etc.). The Receiver is imposed upon to assume a superior position; i. e., the Sender construes himself as being in such a low position that it becomes difficult for the Receiver to do anything but to direct, control, judge, lead (etc.) him.

D. Examples of High, Moderate and Low responses to a sample statement

Sample statement: "I'm going to make plane reservations to Florida for spring vacation."

Low Submissive Responses	1. I've never been south of Georgia. 2. I want to go to Florida also. Do you think if I wait until next week I can still get a reservation? 3. I'd like to go on vacation but I don't know if I'll be able to get those term papers finished on time.
Moderate Submissive Responses	1. Isn't it going to be hard to find things to do in a strange place? 2. I want to go to Florida also. Making reservations is such a hassle. Hey, when you make those reservations, make some for me too. Huh? 3. You'll probably get those term papers done. But I'm not sure I'll be able to.
High Submissive Responses	1. You're so brave. Going all the way to Florida by yourself. 2. Oh, wow! I'm so scared of flying. Take me with you. 3. I'd like to go to Florida too. But I can't finish all those term papers like you can. I'm such a slowpoke.

V. Hostility--Horizontal "Against" Positioning

A. Some behaviors that fall in the domain of Hostility. Rating for quality.

Ridiculing; deprecating; maligning; depreciating; belittling; acting sadistic, contemptuous; displaying "chip-on-the-shoulder" attitude or rebelliousness; expressing anger, annoyance, irritation, impatience, blaming; expressing cynicism, skepticism, wariness; defying; attacking; rejecting; punishing.

B. Hostile caricature

Puts self in "against" position by treating others as attackers, villains, rivals, enemies, persecutors, exploiters, or people worthy of contempt. Is sarcastic, suspicious, impatient; complains, irritates, annoys, argues; berates, ridicules, excoriates, maligns or blames others or self. Makes decisions with indifference or malevolence toward the wishes, feelings, desires, etc., of others. Reacts to stress by attacking or distrusting others. Also by feeling righteously indignant or getting others to attack him.

Belligerent or self-demeaning presentation of self. Uses gestures and facial expressions like raised fist, scowls, sneers, leers. Curses readily and vigorously. Angry tone of voice. Uses sarcastic, belligerent or martyred tone in writing.

C. Rating for intensity

We can extend the analogy of Hostility as "Against" positioning to

include intensity. When a Sender assumes a Hostile position, he is either construing the Receiver and himself as adversaries opposing one another, or, he is asking the Receiver to join him in attacking himself, a third person or the situation. If a person's response reveals that he is assuming an "Against" position, we can ask, "How much force is he exerting against whomever, or whatever, he is attacking?" Therefore, we can view variations in intensity of Hostility as variations in the force exerted by the Sender against the Receiver, himself, a third person or the situation.

Bearing the above analogy and the Hostility caricature in mind, the following principles should prove helpful in discriminating among the three levels of Hostility.

1. High Hostility: 7 rating

The hostility entails a radically negative evaluation. The object of the hostility is seen as worthless, evil, contemptible and with little or no saving graces. The extent of hostility is unqualified and is explicitly and emphatically expressed. The effect is often to generate pain or hurt of a debilitating nature; and it is likely to produce a comparably hostile response.

2. Moderate Hostility: 6 rating

The hostility may be qualified, but it is expressed with marked emotional flavor. The basic attitude is one of substantial hostility, but it is qualified. The hostility is directed neither at the intrinsic nature

of the object, nor at some incidental quality of the object. The effect is often to generate pain and hurt, but not of a debilitating nature.

3. Low Hostility: 5 rating

The attitude toward the object is essentially of mild hostility, neutrality or even affection and the hostility expressed is limited to some highly qualified incidental aspect of its object. The expression of hostility may be direct, indirect or implicit, but the important thing is that it is without marked emotional flavor. The effect is often to produce minor annoyance, or irritation, or even to promote constructive self-evaluation.

D. Examples of Low, Moderate and High Dominant responses to a sample statement

Sample statement: "I'm going to make plane reservations for Florida for spring vacation."

High Hostile Responses	1. I guess you really are having a hard time finding women (men) up here. 2. The little rich boy (girl) has his (her) fling. 3. You'll really fit in with that phoney Miami Beach crowd.
Moderate Hostile Responses	1. You'll probably have a good time. With my personality I wouldn't last two days. 2. Jesus, I wish I had money to throw around like that. 3. What a bourgeois place to go.
Low Hostile Responses	1. If I weren't such a coward about flying, I'd fly too. 2. But Florida is such a dull place. Why don't you go to the Bahamas?

VI. Affection--Horizontal "Toward" Positioning

A. Some behaviors that fall in the domain of Affection. Rating for quality.

Loving; sympathizing; supporting; helping; encouraging; commiserating; displaying affection, agreeableness; doting; pampering; self-sacrificing; helping; displaying openness, acceptance, friendliness, warmth, generosity, tolerance, patience; trusting; looking on the "bright side"; expressing optimism, Pollyannish attitude; praising; showing consideration, appreciation, understanding; behaving politely, respectfully; cooperating.

B. Caricature of Affection

Puts self in "Towards" position by treating others as friends, trusted allies, confidantes, people whose help could be taken for granted or people to whom help will be given without hesitation or reservation. Sees other people and/or self as worthy of respect, trust and affection. Is tender and softhearted, forgiving, kind and reassuring. Is fond of everyone and is always friendly, neighborly and sociable. Gives freely of self and is big-hearted. Expresses optimism; sees a "silver lining in every cloud." Makes decisions with consideration or active concern for the feelings, wishes, desires, etc., of others. Reacts to stress by being effusively affectionate, by being extremely solicitous toward the welfare of others, or by adopting an "everything will be beautiful" attitude. Also by emphasizing own self-esteem and expressing certainty about the trustworthiness of and help that can be expected from others.

Benevolent, saintly or effusively affectionate presentation of self. Uses gestures and facial expressions like caressing, touching, stroking,

smiling. Affectionate, sincere, or soothing tone of voice. Expressions like, "Oh, how nice," "It'll be all right," "Thank you so much," ". . . , Dear," "Honey."

C. Rating Affection for intensity

Extending the position analogy to include Affection, we can view variations in Affection as variations in the force exerted in moving toward the object of affection.

1. Low Affection: 3 rating

The Sender's attitude toward the object is essentially neutral or one of mild affection or even hostility. The affection is limited to some incidental aspect of its object. The expression of the affection may be direct, indirect or implicit, but the important thing is that it is without marked emotional flavor. The effect is not likely to produce a significant amount of pleasure in the Receiver, but is generally seen as only expected politeness, affability, etc.

2. Moderate Affection: 2 rating

The affection may be qualified, but it is expressed with marked emotional flavor. The basic attitude toward the object is one of substantial affection but not as extreme as in a response rated "1." The affection is directed neither at the intrinsic nature of the object, nor at some incidental quality of the object. The communication reflects approval but not adulation.

3. High Affection: 1 rating

The affection entails a radically positive evaluation. The object of the affection is seen as valuable and worthy of admiration and respect; and is seen to have only minor faults, or no faults at all. The extent of affection is unqualified, and it is explicitly and emphatically expressed. The effect is to generate pleasure, good feeling or reassurance in the object.

D. Examples of High, Moderate and Low Affectionate responses to a sample statement

Sample statement: "I'm going to make plane reservations for Florida for spring vacation."

High Affection Responses	1. I'm so happy for you. A vacation like that couldn't happen to a nicer person. 2. Oh, Florida is a paradise. You'll never be able to leave. You'll love it. 3. You're terrific! Work hard, get your stuff done, and then go on vacation. I really admire you.
Moderate Affection Responses	1. That's great! You really deserve a vacation. 2. Florida's a great place. I'm sure you'll enjoy yourself. 3. You must be a super well-organized person to be able to take a spring vacation.
Low Affection Responses	1. Have a good time. 2. That's cool. Where are you going to stay? 3. Florida is a fun place.

E. Examples of responses that are Neutral on both D-S and H-A dimensions

1. Oh, you're going on a trip.
2. Oh, yea. I've got an uncle who lives in Florida.
3. What part of Florida are you going to?

VII. Sample Responses to Sample Items with Ratings on Both Dimensions

Sub.	1	2	3	4	5	6	7	Dom.
	Hi	Mod	Lo	Neut	Lo	Mod	Hi	

Aff.	1	2	3	4	5	6	7	Host.
	Hi	Mod	Lo	Neut	Lo	Mod	Hi	

Item A: "I just got a letter from my draft board telling me I'm to be drafted soon. I don't want to go."

Response:

Ratings

1 Gee, that's too bad. 4;3

2 That's horrible. I feel so bad for you. I'll do anything I can to help. 5;1

3 Where's your patriotic spirit! You coward. The army makes men out of boys. 7;7

4 I've got a friend who's a draft counselor. Do you want his name? 5;3

5 I know a doctor who writes letters and gets people out. I'll call him for you. 7;3

6 Oh, my God! I hope my telling you not to worry about it didn't affect things. 1;3

7 You fool. If you'd listened to me earlier and applied for a medical exemption, you wouldn't be in this mess. 6;6

8 Do you have any grounds on which to appeal? 4;4

9 Neither would I. 4;3

10 But you'll have to go; it'll work out O.K. Don't worry. 6;2

Item B: "I know I've already made two loans from you already. But I need \$10."

Response:	Ratings
1 When you pay back the other two, I'll be in the position to lend you more.	6;4
2 No more loans!	7;5
3 I'm just so poor now. Why do you always take advantage of me?	1;6
4 Are you asking me for another loan? (Indignantly)	4;6
5 Are you asking me for another loan?	4;5
6 I don't have any money now. I'm sorry for you. I'll try to see if I can borrow it from someone else for you.	1;2
7 What do you need it for?	6;4
8 You poor thing! I'll lend you the money but let me make a budget for you so this won't happen to you again.	7;1
9 What have you done with the money I've given you already? Burned it up?	6;6
10 I'll give it to you, you incompetent S.O.B.	5;7
11 Incompetent leech! I'm not giving you another dime because I know you'll throw it away on junk.	7;7

Item C: You've just told X that you've accepted a job in the town he lives

X: "As soon as you get to the airport, call me. I'll pick you up and help you get located."

Response:	Ratings
1 I appreciate the thought. But I'd rather do it myself.	5;3
2 I already have a place to live.	4;4
3 Lay off. I'd rather do it myself.	5;6
4 I hope that won't be putting you to a lot of trouble. Oh, I'm so incompetent at those things. I don't know what I'd do without you.	1;1
5 Well, O. K. --if it's no inconvenience to you.	3;4
6 Good. And maybe you can pick up my trunk for me too? I shipped it Railway Express.	6;4
7 Maybe we can meet for dinner sometime. After I get settled.	5;3
8 You must be very lonely (sincere).	6;2
9 What are you? Some kind of sickie?	6;7
10 Great! Thanks. If you didn't I wouldn't be able to make it myself.	2;2
11 Yea. But will you really do it?	3;5
12 Quit bugging me. I've got to learn to do these kinds of things myself.	3;6

APPENDIX II

THE STIMULUS TAPES

Experimental Tape 1: H-D Fixated

<u>Item</u>	<u>Statement</u>	<u>Style</u>
1.	I can't get to class today. Do you think you can take some notes for me without messing up?	H-D
2.	I heard you saying you're having chocolate pie for dessert. I just wanted you to know I happen to be allergic to chocolate.	H-D
3.	Look, I know you're into working, but I simply cannot work on this project one minute longer. Now if we go out and have a few beers I'll be able to get into it later.	H-D
4.	My dad runs an employment agency. I can get you a great summer job.	A-D
5.	Look, you're bright enough. That's not your problem.	H-D
6.	You can't wear that dress tonight. It would be a disaster.	H-D
7.	Look, you'd just better slow down right now! It's raining and there's lots of traffic.	H-D
8.	Well, I would like to come to your party but y'know as usual I've got three term papers. I hope you (pause) uh (pause) get around to asking me again.	H-S

Experimental Tape 1 (continued)

<u>Item</u>	<u>Statement</u>	<u>Style</u>
9.	Well, you do have a point--for a change. The last few weeks have been a bitch. I need a vacation!	H-D
10.	Well, sure it's a terrific ring! It belonged to my grandmother.	H-D
11.	Make up your mind! If you don't want the radio, I'll give it to someone else. That's all there is to it!	H-D
12.	Oh, I do want to help! But it's hard on me when you (pause) interrupt. Could you please try to be a little more patient with me?	A-S
13.	Shit! I'm getting tired lately. I must get some more sleep!	H-D
14.	I haven't heard from Bob all week. Look up that number for me and I'll call him.	H-D
15.	I'm glad you made it. You're late again and you had me worried.	H-D
16.	Well, I heard <u>you</u> did well on that exam. Some people do good work.	H-S
17.	No loans now! Do you understand? When I get paid next week, come back and try again.	H-D
18.	Well, did you get it at Town and Campus? That is my favorite store. But, tell me, how did you manage to pick a gift like that?	H-D
19.	You can't help this afternoon, hmm. Well, we'll manage just fine without you.	H-D
20.	Wow, it's so nice of you to offer to help. But (pause) I ought to do it myself, I think.	A-S
21.	Here we go again. You're making it impossible to reach a decision. Go home, and think about it, and we'll talk more tomorrow.	H-D

Experimental Tape 1 (continued)

<u>Item</u>	<u>Statement</u>	<u>Style</u>
22.	Well, I heard you say you're not doing anything again tonight. You might as well join us for dinner.	H-D
23.	You certainly got that cheaply. At least you know how to shop well.	H-D
24.	Maybe someday I'll learn to be practical like you. I didn't follow your little suggestion about, uh, reserving seats for the concert in advance. Well, when we got there it was sold out.	H-S
25.	I don't want to be late for my appointment. Now you check the time!	H-D
26.	You're quite the social butterfly. Now tell me, where's the best place to meet people around here?	H-D
27.	When I write a paper, I do an outline first. You should try it. It'll help you too.	A-D
28.	I'm having some people over to dinner tonight. Let me have some butter.	H-D
29.	Gee--I didn't get a chance to tell you then, but the way you stood up to Sally yesterday was terrific. I was so impressed!	A-S
30.	Oh, by the way, I lost that book you lent me last week. Now don't be upset. I'll get you another copy when I go downtown.	H-D
31.	Look, dummy, I told you I don't know how to use a drill. Now you get in here and help me get this bracket on the wall.	H-D
32.	You should have told me I was in your way! I'll move to the side. I wouldn't want you to miss seeing anything.	H-D
33.	Hey look, I've got two tickets for the concert on Saturday, and I decided to go home this weekend. You take them, and ask Jim, and have a good time.	A-D

Experimental Tape 1 (continued)

<u>Item</u>	<u>Statement</u>	<u>Style</u>
34.	I'm really hungry. Don't you have anything to eat around here?	H-D
35.	I just got that record you said you like. If you come over to my house you can listen to it.	H-D
36.	They just said there's a 90% chance of rain tomorrow. Too bad it looks like you won't be able to go on that picnic.	H-D

Control Tape 1: Flexible

<u>Item</u>	<u>Statement</u>	<u>Style</u>
1.		H-D
2.	Identical to corresponding items on Experimental Tape 1.	H-D
3.		H-D
4.	My dad runs an employment agency. I can get you a great summer job.	A-D
5.	Look, you're really bright. That's not your problem	A-D
6.	Gee, I don't know. I guess you're right. It might be a mistake to wear that dress tonight.	A-S
7.	You know it's raining and there is a lot of traffic. I couldn't ask you to slow down a little. You're in too much of a hurry.	H-S
8.	Well, I would like to come to your party. But y'know as usual I've got three term papers. I hope you (pause) uh (pause) get around to asking me again.	H-S
9.	Oh yeah. You're right. Thanks. The last few weeks have been tough on me. I guess I really might need a vacation.	A-S

Control Tape 1 (continued)

<u>Item</u>	<u>Statement</u>	<u>Style</u>
10.	Oh, yeah; that's my grandmother's ring. Isn't it terrific?	A-D
11.	Oh, too bad you can't use the radio. Don't worry. I'll give it to someone else.	A-D
12.	Oh, I do want to help! But it's hard on me when you (pause) interrupt. Could you please try to be a little more patient with me?	A-S
13.	I don't know (pause) I get tired a lot. What a life (sigh). Now I've got to get more sleep too, I guess. Shit!	H-S
14.	I haven't heard from Bob all week. I don't know (pause) I was kind of thinking of calling him. That's not something <u>you</u> would do. You're so secure.	H-S
15.	I'm so glad you made it. I was so worried, because you're late and I thought you might not come.	A-S
16.	Well, I heard <u>you</u> did well on that exam. Some people do good work.	H-S
17.		H-D
18.	Identical to corresponding items on Experimental Tape 1.	H-D
19.		H-D
20.	Wow, it's so nice of you to offer to help. But (pause) gee (pause) I ought to do it myself, I think.	A-S
21.	Oh, gee, we can't reach a decision. What do you think we should do?	A-S
22.	Hey, I heard you saying you're not doing anything for dinner tonight. Come on and join us.	A-D
23.	Boy, you got that so cheaply! You know, you really do well.	A-D

Control Tape 1 (continued)

<u>Item</u>	<u>Statement</u>	<u>Style</u>
24.	Maybe someday I'll learn to be practical like you. I didn't follow your little suggestion about, uh, reserving seats for the concert in advance. Well, when we got there it was sold out.	H-S
25.	Oh no, now I'm going to be late for my appointment. I don't even see a clock around here. What time do you have?	H-S
26.	Wow, you're always so busy socially. Do you think you might tell me where to meet people around here?	A-S
27.	When I write a paper, I do an outline first. You should try it. It'll help you too.	A-D
28.	Listen, I'm having some people over to dinner tonight and I ran out of butter. Lend me some--and you come too.	A-D
29.	I didn't get around to telling you yesterday. But the way you stood up to Sally was (pause), ugh, I could never do anything like that.	H-S
30.	Ugh, I went ahead and lost that book you lent me last week. Shit, I don't know what to do now. I guess I could make a trip downtown (pause). Okay?	H-S
31.	Gee, I don't know how to use a drill. What do you think we should do?	A-S
32.	I'm sorry. I didn't realize I was in your way. I'll move to the side so you can see. Is that all right now?	A-S
33.	Hey, look, I've got two tickets for the concert on Saturday, and I decided to go home this weekend. You take them, and ask Jim, and have a good time.	A-D
34.		H-D
35.	Identical to corresponding items on Experimental Tape 1.	H-D
36.		H-D

Experimental Tape 2: H-D Fixated

This tape is identical to Experimental Tape 1, except that Items 34, 35, and 36 appear at the beginning of the tape, and Items 1, 2, and 3 appear at the end.

Control Tape 2: Flexible

This tape is identical to Control Tape 1, except that Items 34, 35, and 36 appear at the beginning of the tape and Items 1, 2, and 3 appear at the end.

Experimental Tape 3: A-S Fixated

<u>Item</u>	<u>Statement</u>	<u>Style</u>
1.	Oh, look, I can't make it to class today. (pause) Would you do me a big favor and take some notes for me?	A-S
2.	Gee, I'm allergic to chocolate. I just wanted to tell you so you'll know it's not that I don't like your dessert.	A-S
3.	Oh, I know you're into working. But if you wouldn't mind taking a break, and maybe having a beer, I really think I could do a better job.	A-S
4.	My dad runs an employment agency. I can get you a great summer job.	A-D
5.	Oh, you really are so bright. I don't think that's your problem.	A-S
6.	Gee, I don't know. I guess you're right. It might be a mistake to wear that dress tonight.	A-S
7.	It's raining and there's lots of traffic. Could (pause) could I ask you to slow down a little?	A-S
8.	Well, I would like to come to your party. But y'know as usual I've got three term papers. I hope you (pause) uh (pause) get around to asking me again.	H-S

Experimental Tape 3 (continued)

<u>Item</u>	<u>Statement</u>	<u>Style</u>
9.	Oh yeah. You're right. Thanks. The last few weeks have been tough on me. I guess I really might need a vacation.	A-S
10.	Oh, thank you! I'm really glad you like my ring. My grandmother gave it to me.	A-S
11.	Uh (pause) oh (pause) since you can't use the radio, do you think it would be all right if I gave it to someone else who can?	A-S
12.	Look, I want to help, but it's impossible with you constantly interrupting. Now be patient!	H-D
13.	Gee, I'm getting so tired lately. I don't know, I guess maybe I've just got to get more sleep.	A-S
14.	I haven't heard from Bob all week, and I was thinking that I should call him, but I don't know. What do you think I should do?	A-S
15.	I'm so glad you made it. I was so worried because you're late and I thought you might not come.	A-S
16.	Well, I heard <u>you</u> did well on that exam. Some people do good work.	H-S
17.	I'm sorry. I don't have any money now. But (pause) but, when I get paid next week, then I can lend you some money.	A-S
18.	Gee, thanks so much for the gift! And you even got it at Town and Campus--my favorite store.	A-S
19.	You can't help this afternoon. Well, I think we'll be able to manage it okay. But, I tell ya' if we run into trouble, can we give you a call?	A-S
20.	Thanks for the offer, but look, I can't really use your help. I can do it more efficiently myself.	H-D

Experimental Tape 3 (continued)

<u>Item</u>	<u>Statement</u>	<u>Style</u>
21.	Oh, gee, we can't reach a decision. What do you think we should do?	A-S
22.	Oh, I, uh, heard you say you're not doing anything tonight. Gee, if you'd like, we'd really dig it if you'd come with us to dinner.	A-S
23.	Gee, you got that cheaply. You really do so well.	A-S
24.	Maybe someday I'll learn to be practical like you. I didn't follow your little suggestion about, uh, reserving seats for the concert in advance. Well, when we got there it was sold out.	H-S
25.	I don't want to be late for my appointment. Could you do me a favor and check the time?	A-S
26.	Wow, you're always so busy socially. Do you think you might tell me where to meet people around here?	A-S
27.	When I write a paper, I do an outline first. You should try it. It'll help you too.	A-D
28.	I'm having some people over to dinner tonight, and I don't have any butter. Do you think you could let me (pause) borrow some? I'd really appreciate it.	A-S
29.	I didn't get the chance to tell you then, but I was impressed with the way you stood up to Sally. It's about time you were able to do that.	H-D
30.	Rats! I lost that book you lent me last week. I'm really sorry. I don't know what to do now. (pause) Listen, if it's okay with you I can get you another copy when downtown tomorrow. Would that be okay?	A-S
31.	Gee, I don't know how to use a drill. What do you think we should do?	A-S
32.	I'm sorry. I didn't realize I was in your way. I'll move to the side so you can see. Is that all right now?	A-S

Experimental Tape 3 (continued)

<u>Item</u>	<u>Statement</u>	<u>Style</u>
33.	Hey, look, I've got two tickets for the concert on Saturday, and I decided to go home this weekend. You take them, and ask Jim, and have a good time.	A-D
34.	Oh, I'm so hungry. Do you think you might have something around that I can eat?	H-S
35.	I just got this great record. I think you'll like it. If you want, come on over and listen to it.	A-S
36.	Gee, they just said there's a 90% chance of rain tomorrow. It would really be too bad if you can't go on that picnic. Don't you think?	A-S

Control Tape 3: Flexible

<u>Item</u>	<u>Statement</u>	<u>Style</u>
1.		A-S
2.	Identical to corresponding items on Experimental Tape 3.	A-S
3.		A-S
4.	My dad runs an employment agency. I can get you a great summer job.	A-D
5.	Look, you're really bright. That's not your problem.	A-D
6.	You can't wear that dress tonight. It would be a disaster.	H-D
7.	You know it's raining and there's a lot of traffic. I couldn't ask you to slow down a little. You're in too much of a hurry.	H-S
8.	Well, I would like to come to your party. But y'know as usual I've got three term papers. I hope you (pause) uh (pause) get around to asking me again.	H-S

Control Tape 3 (continued)

<u>Item</u>	<u>Statement</u>	<u>Style</u>
9.	Well, you do have a point--for a change. The last few weeks have been a bitch. I need a vacation!	H-D
10.	Oh, yeah, that's my grandmother's ring. Isn't it terrific?	A-D
11.	Oh, too bad you can't use the radio. Don't worry. I'll give it to someone else.	A-D
12.	Look, I want to help, but it's impossible with you constantly interrupting. Now be patient.	H-D
13.	I don't know (pause). I get tired a lot. What a life (sigh). Now I've got to get more sleep too, I guess. Shit!	H-S
14.	I haven't heard from Bob all week. I don't know (pause) I was kind of thinking of calling him. That's not something you would do. You're so secure.	H-S
15.	I'm glad you made it. You're late again and you had me worried.	H-D
16.	Well, I heard <u>you</u> did well on that exam. Some people do good work.	H-S
17.		A-S
18.	Identical to corresponding items on Experimental Tape 3.	A-S
19.		A-S
20.	Thanks for the offer, but look, I can't really use your help. I can do it more efficiently myself.	H-D
21.	Here we go again. You're making it impossible to reach a decision. Go home, and think about it, and we'll talk more tomorrow.	H-D
22.	Hey, I heard you saying you're not doing anything for dinner tonight. Come on and join us.	A-D

Control Tape 3 (continued)

<u>Item</u>	<u>Statement</u>	<u>Style</u>
23.	Boy, you got that so cheaply! You know, you really do well.	A-D
24.	Maybe someday I'll learn to be practical like you. I didn't follow your little suggestion about, uh, reserving seats for the concert in advance. Well, when we got there it was sold out.	H-S
25.	Oh no, now I'm going to be late for my appointment. I don't even see a clock around here. What time do you have?	H-S
26.	You're quite the social butterfly. Now tell me, where's the best place to meet people around here?	H-D
27.	When I write a paper, I do an outline first. You should try it. It'll help you too.	A-D
28.	Listen, I'm having some people over to dinner tonight and I ran out of butter. Lend me some--and you come too.	A-D
29.	I didn't get around to telling you yesterday. But the way you stood up to Sally was (pause). Ugh, I could never do anything like that.	H-S
30.	Ugh, I went ahead and lost that book you lent me last week. Shit, I don't know what to do now. I guess I could make a trip downtown (pause). Okay?	H-S
31.	Look, dummy, I told you I don't know how to use a drill. Now you get in here and help me get this bracket on the wall.	H-D
32.	You should have told me I was in your way! I'll move to the side. I wouldn't want you to miss seeing anything.	H-D
33.	Hey look, I've got two tickets for the concert on Saturday, and I decided to go home this weekend. You take them, and ask Jim, and have a good time.	A-D

Control Tape 3 (continued)

<u>Item</u>	<u>Statement</u>	<u>Style</u>
34.		A-S
35.	Identical to corresponding items on Experimental Tape 3.	A-S
36.		A-S

Experimental Tape 4: H-D Fixated

This tape is identical to Experimental Tape 3, except that Items 34, 35, and 36 appear at the beginning of the tape and Items 1, 2, and 3 appear at the end.

Control Tape 4: Flexible

This tape is identical to Control Tape 3, except that Items 34, 35, and 36 appear at the beginning of the tape and Items 1, 2, and 3 appear at the end.

APPENDIX III

PROCEDURE FOR PREPARING PRACTICE TAPE

A 27-year-old actor was briefly familiarized with the Leary system and instructed to perform 30 statements which all differed in content and varied in style. None of these statements were the same as those utilized in or considered for the stimulus tapes used in the main part of the experiment. The actor's performance was tape-recorded; and the tape was submitted to the raters, who were instructed to rate each statement as they had rated previous stimulus materials.

The raters then independently rated each statement on the tape. In order for a response to be selected for inclusion on the practice tape, all raters had to agree that this response fell in the same stylistic category. Using this process, it was possible to select six statements, that fit the criteria for the practice tape, from the original 30 statements. The statements that follow were those included on the practice tape:

Item	Statement	Style
1.	Well, if you try to fix that you might get hurt. Let me take a look at it first.	A-D

Item	Statement	Style
2.	I've told you again and again to look behind you before you back up. Damn it, why won't you listen!	H-D
3.	Thanks so much for typing that paper for me. I don't know what I would have done without you.	H-S
4.	Well it is a nice car. I guess it helps to have a rich father.	H-S
5.	I didn't know you already had your plans made. Next time I'll call two weeks in advance.	H-S
6.	You look kind of sad. Let's go over to the Cambridge Inn and have something to eat and we'll talk about it.	A-D

REFERENCES

Adams, H. B. "Mental illness" or interpersonal behavior. American Psychologist, 1964, 19, 191-197.

Becker, W. C., & Krug, R. S. A circumplex model for social behavior in children. Child Development, 1964, 35, 371-396.

Benjamin, L. S. Structural analysis of social behavior. Psychological Review, 1974, 81, 392-425.

Berne, E. Transactional analysis in psychotherapy. New York: Grove Press, 1961.

Berne, E. Games people play. New York: Grove Press, 1964.

Carson, R. C. Interpersonal conceptions of personality. Chicago: Aldine Publishing Company, 1969.

Chance, E. Content analysis of verbalizations about interpersonal experience. In L. Gottschalk, & A. Auerbach (Eds.), Methods of research in psychotherapy. New York: Appleton-Century-Crofts, 1966.

Dietzel, C. S. Client-therapist complementarity and therapeutic outcome. Unpublished doctoral dissertation, Michigan State University, 1972.

Dittman, A. T. Problems of reliability in observing and coding social behavior. Journal of Consulting Psychology, 1958, 22, 430.

Edquist, M. H. Interpersonal choice and social attraction among four interpersonal types. Unpublished doctoral dissertation, Duke University, 1973.

Foa, I. G. Convergences in the analysis of the structure of interpersonal behavior. Psychological Review, 1961, 68, 341-353.

Freedman, M. B., Leury, T. F., Ossorio, A. G., & Coffey, H. S. The interpersonal dimension of personality. Journal of Personality, 1951, 20, 143-161.

Haley, J. Strategies of psychotherapy. New York: Grune and Stratton, 1963.

Heller, K., Myers, R. A., & Kline, L. V. Interviewer behavior as a function of standardized client roles. Journal of Consulting Psychology, 1963, 27, 117-122.

Kronberg, C. L. Toward a conceptualization of interpersonal style. Unpublished paper, Duke University, 1970.

La Forge, R., Leary, T. F., Naboisek, H., Coffey, H. S., & Freedman, M. B. The interpersonal dimension of personality: II. An objective study of repression. Journal of Personality, 1954, 23, 129-153.

La Forge, R., & Suczek, R. The interpersonal dimension of personality: III. An interpersonal check list. Journal of Personality, 1955, 24, 94-112.

Leary, T. Multilevel measurement of interpersonal behavior. Berkeley: Psychological Consultation Service, 1956.

Leary, T. Interpersonal diagnosis of personality. New York: Ronald Press, 1957.

Levenson, E. A. The fallacy of understanding. New York: Basic Books, 1972.

Lorr, M., & McNair, D. M. An interpersonal behavior circle. Journal of Abnormal and Social Psychology, 1963, 67, 68-75.

Lorr, M., & McNair, D. M. Expansion of the interpersonal behavior circle. Journal of Personality and Social Psychology, 1965, 2, 823-830.

McKenzie, M. The interpersonal behavior of normal and clinic family members. Unpublished doctoral dissertation, Michigan State University, 1968.

Mueller, W. J. Patterns of behavior and their reciprocal impact in the family and in psychotherapy. Journal of Counselling Psychology, Monograph, 1969, 16 (2, Pt. 2).

Mueller, W. J., & Dilling, C. A. The usefulness of studying interpersonal themes in psychotherapy research. Journal of Counselling Psychology, 1968, 15, 50-58.

Raush, H. L., Dittman, A. T., & Taylor, T. J. The interpersonal behavior of children in residential treatment. Journal of Abnormal and Social Psychology, 1959, 58, 9-26.

Raush, H. L. Farbman, I., & Llewellyn, R. G. Person, setting and change in social interaction. II. A normal-control study. Human Relations, 1960, 13, 305-333.

Schaefer, E. S. A circumplex model for maternal behavior. Journal of Abnormal and Social Psychology, 1959, 59, 226-235.

Shannon, J., & Guerney, B. Interpersonal effects of interpersonal behavior. Journal of Personality and Social Psychology, 1973, 26, 142-150.

Sullivan, H. S. The interpersonal theory of psychiatry. New York: Norton, 1953.

Terrill, J. M., & Terrill, R. A. A method for studying family communication. Family Process, 1965, 4, 259-290.

Winer, B. J. Statistical principles in experimental design. New York: McGraw-Hill, 1962.

BIOGRAPHY

Name: Charles Louis Kronberg

Date of Birth: March 13, 1945

Place of Birth: Brooklyn, New York

Education: B.A., Brooklyn College, Brooklyn, New York,
1961-1965
Duke University, Durham, North Carolina,
1965-present

Academic Honors and Awards: New York State Regents College Scholarship,
1961-1965
Graduated cum laude with honors in psychology,
1965
United States Public Health Service Trainee,
1965-1969
Veterans Administration Internship in Clinical
Psychology, 1970-1971

Positions Held: Staff Psychologist, Catholic Charities Guidance
Clinic, Brooklyn, New York, 1971
Staff Psychologist, Project Enlightenment,
Raleigh, North Carolina, 1972-1973
Clinical Supervisor, Department of Psychology,
Duke University, Durham, North Carolina,
1972-1973
Clinical Psychology Fellow, Department of
Psychiatry, North Carolina Memorial Hos-
pital, Chapel Hill, North Carolina, 1973-
1974
Staff Psychologist and Educational Diagnos-
tician, Project Enlightenment, Raleigh, North
Carolina, 1974-present



D91003P22N

Kronberg, Charles Louis, 1945-
Pr.D. K931 1975 C.1
Duke University Libraries